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EDUCATION IN ACCIDENT PREVENTION

A treatise showing how accident prevention may be made a part of regular school instruction without the addition of another subject to the curriculum

Prepared at the request and with the approval of the National Safety Council, by a Member of the Council's Committee on Education

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PREFACE

The program presented here is the outgrowth of an effort in the St. Louis public schools to adjust the curriculum to the needs of life; it represents only one of the numerous things that must receive attention in the solution of educational reconstruction. This program does not merely represent the best educational theory in practice; it is a miniature picture of what is going on in the schoolroom at the present time. There is, therefore, no question of its feasibility.

The author is indebted to many persons for the inspiration and preparation of this book. First of all, the idea grew directly out of the request of Dr. John W. Withers, Superintendent of Schools of St. Louis, that the College Faculty work out a program of education that would tend to conserve the human factor in the city's life. After careful consideration it was decided that two elements are involved: first, health, including physical training, recreation, and hygiene of the whole population; and second, accident prevention. This represents the accident prevention program. The author, therefore, is under deepest obligations to Dr. Withers for the suggestion, and for the years of close coöperation in working out the ideals represented in this volume as a teacher in the Harris Teachers College, with him as principal. The inspiration and the specific direction of this work came from him, and grew out of the educational discussions in faculty meetings and in personal conversation. While the views represented are not his, he ought to have full credit for whatever there is of merit in this work.

Acknowledgment is also due to many other persons. Among those who should be specifically named are: the local Safety Council, for furnishing data used in this volume; Mr. John J. Maddox, Principal of the Wyman School, for the description of the Wyman School organization, and for carrying out the details of the plan as here presented in his school; to Miss Margaret McLaughlin and Miss Genevieve Apgar, for the chapter on Accident Prevention through Language Instruction; Miss Jean Kimber and Miss Florence A. Everett, for the chapter on Drawing; Mr. Drushel, for many of the problems in the chapter on Arithmetic; to Dr. George S. Counts, Miss Mary Andrew, and Miss Leonide M. Girault, for the material on history and community relations; to Miss Elyce C. Crecelius, for the photographs; and to Miss Ruth Uthoff for the stenographic report of type lessons in the Wyman School. The author is also under obligation to his wife, Anna Smith Payne, for a careful reading of the manuscript and for correction of proofs; to Dr. M. J. Mayo, of the Harris Teachers College, Mr. Thomas J. Rucker of the Wyman School, and Miss Mary B. Day, Librarian of the National Safety Council, for assistance in the preparation of additions to the second edition.

In order to make the book more serviceable we have added an appendix, consisting of an elaboration of the arithmetic, the Prone Pressure Method of Resuscitation, and a bibliography.

E. GEORGE PAYNE.

FOREWORD

By the President of the National Safety Council

Twelve years ago one of the large steel companies organized Safety in its plants and mines and started a campaign which marked the beginning of the Safety Movement in America.

Notwithstanding the remarkable work which has been done in hundreds of industrial plants, deaths and serious injuries being reduced 50 to 90 per cent, the Safety Movement in industry has not yet made the progress that is possible, and Public Safety is still in its infancy.

Managers of large industries are beginning to realize that the problem of industrial safety will not be solved until the idea of Safety has been incorporated into the community life; that is, until safety instruction is given in the schools and until Safety is established in the thought and life of the people on the same basis as good health. The fact that two-thirds of all the accidental deaths in the United States occur outside of industry emphasizes the importance of a campaign to promote Safety on the streets and in the homes. Safety engineers are coming to see that the foundation of Safety must be laid in the schools. When the children in the schools are instructed how to protect themselves and are taught to respect Safety, then through these children the parents in the homes will be reached and influenced more effectively than in any other way.

Dr. Payne at the request of the National Safety Council has prepared this syllabus not to discuss the subjects theoretically, but to outline in detail just how Safety is being taught in the schools of St. Louis and how it can be taught elsewhere. The plan outlined in this book is the first thoroughgoing plan which has been developed, and in the estimation of the National Safety Council marks one of the most valuable contributions which have been made to the Safety Movement in the past twelve years.

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ACCIDENT PREVENTION

CHAPTER I

THE ECONOMICS OF ACCIDENT PREVENTION

For several years there has been an active movement for the prevention of accidents in the United States. This movement grew out of a consciousness on the part of American business men and social thinkers that through a continuous safety campaign of education the gradually increasing number of accidents in industry might be curtailed. The need of the movement came to be particularly felt because of the greatly increased number of accidents that resulted from the complex organization of life in our modern urban communities. The movement is correlated with the growing concept of the value of life that the latter half of the nineteenth and the twentieth centuries have produced. The need for organized safety led to the formation of the National Safety Council in 1912. Since that time considerable attention has been paid to the character and causes of accidents; our accident statistics are, however, still meagre and inadequate for a thoroughgoing study of the best means and methods of accident prevention.

In the year 1913 there were about 25,000 deaths in the United States due to industrial accidents, about 700,000 serious injuries that kept the injured away from work four weeks or more, and about 300,000 injuries that kept those injured away from work six weeks or more. This serious condition, when once it became known, led the managers of industrial enterprises to undertake a concerted effort to eliminate accidents in their plants, with the result that in 1917 the number of deaths due to industrial accidents had been reduced from approximately 25,000 to approximately 22,000, the number of serious injuries from about 700,000 to about 500,000 and those keeping the injured from work six weeks or more from about 300,000 to about 260,000; a decrease of 12 per cent in fatalities and a decrease of 28 per cent in the number of serious accidents. This decline was partly due to educational propaganda, which caused greater carefulness on the part of employees, and partly to the introduction of protective devices on machines.

The effect of this safety movement, may be clearly shown from a table giving the safety experience of a large steel plant from 1905 to 1917. The experience of this plant is of particular interest, since complete accident records were available for such an extended period. There is a pronounced, although not entirely regular, decline in both the frequency and severity of accidents during the course of the period.

YEAR	300-DAY WORKERS	ACCIDENT FREQUENCY RATES (per 1000 300-day workers)	ACCIDENT SEVERITY RATES (days lost per 300-day worker, including allowance for deaths and permanent disabilities
1905	6,406	300	64.5
1906	7,494	214	54.3
1907	7,585	189	38.1
1908	4,575	150	29.9
1909	6,215	174	23.7
1910	7,642	134	19.9
1911	5,774	112	18.6
1912	7,396	153	14.3
1913	7,652	115	21.3
1914	4,741	74	12.2
1915	5,599	48	20.6
1916	9,634	96	12.4
1917	10,862	85	12.9

United States Department of Labor, Bureau of Labor Statistics, June, 1918, P. 15.

The effect of the safety campaign may be further illustrated by a study of the accident statistics of the Commonwealth Steel Company for the years 1913 to 1918.

YEAR	DEATHS	LOST-TIME CASES	COM-PENSATION CASES	COMPENSATION RECEIVED BY INJURED	DAYS LOST PER EMPLOYEE (ACTUAL)
1913	2	800	330	$20,015	7.2
1914	1	414	168	8,138	4.2
1915	0	190	98	2,822	2.3
1916	0	769	223	7,638	2.6
1917	1	371	141	9,175	2.4
1918	0	124	57	4,391	.6

The result for 1918 is remarkable when it is considered that 2,473 persons were employed during that year, working a total of 707,462 days. In three months of the year 1918 no lost-time cases were reported.

There is another story, however, for public accidents or accidents occurring in the home, on the street, and generally outside of industrial establishments. There has been a marked growth in the number of this type of accidents in the past few years. An illustration of this growth may be seen in the increase in the number of deaths due to automobile accidents alone, in St. Louis in the past five years. The number occurring in 1912 was 21; in 1913, 39; in 1914, 28; in 1915, 43; in 1916, 65; in 1917, 79; in 1918, 100. The reason for this rapid increase in public accidents, while the industrial accidents have as rapidly declined, is that industrial managers are thoroughly aroused to the necessity of accident prevention in their plants, but the public in general is still unconscious of the significance of safety. The fact is that so far as there has been serious attention paid to public accidents the initiative in that direction has been taken by employers, who have discovered the need and the possibilities of accident prevention in their own establishments. The National Safety Council is now taking a lively interest in the work of preventing public accidents.

Let us note from the meagre statistics something of the seriousness of the loss not merely in social suffering but in the money value of personal injuries. In the year 1917 there were 77,000 deaths due to accidents, 55,000 of which were outside of industrial plants. These data indicate an increase of several thousand deaths due to accidents above the number in 1913, while they show a decrease of about 3,000 — from 25,000 to 22,000 — in the number of deaths resulting from industrial accidents. The total number of all injuries — industrial, public and home — which temporarily or permanently disabled the injured four weeks or more is estimated at 2,000,000 for the year 1917. The following table shows the industrial losses in Wisconsin in the years 1915, 1916, and 1917 due to accidents:

Total injuries	40,980
Deaths	519
Permanent disability	2,388
Temporary injuries (from 1 to 2 weeks)	14,012
Temporary injuries (over 2 weeks)	24,061
Days lost due to death	3,110,280
Days lost due to permanent disability	1,897,700
Days lost due to absence from 1 to 2 weeks	136,373
Days lost due to absence over two weeks	807,485
Total	5,951,838 days

If we reduce these days to years of 300 work days lost we will note the total loss to be equivalent to the loss of the labor of one person for 20,000 years or the labor of 20,000 persons for one year. If we figure the economic loss for these three years counting time alone, it would be $30,000,000, estimating the value of the time lost at $5.00 per day per individual. This does not take into account the loss in doctor's fees, worry, care, and suffering for which no money value can compensate.

While industrial accidents are limited very largely to adults, the same is not true of public accidents. In the year 1916, 10,534 children under ten years of age in the registration area of the United States were killed by accident, with perhaps 250,000 others seriously injured. The deaths were due to various causes, as follows:

Burns	3,220
Drowning	1,017
Automobiles	1,045
Falls	888
Street Cars	161
Railroads	241
Other vehicles	390
All other	3,572
Grand total	10,534

As the registration area for deaths embraced only about 70 per cent of the total population of the United States in 1916, obviously the above figures should be multiplied by 10/7 to get the approximate corresponding estimates for the whole United States at that time.

Accident Statistics of St. Louis, 1912-1917

	1912	1913	1914	1915	1916	1917
Total number of deaths	492	530	459	402	525	510
Total number of accidental injuries fatal and non-fatal (est.).	12,300	12,220	11,475	10,050	13,125	12,750
Number of children killed under 10 years of age . . .	80	88	70	70	78	75
From 10 to 20 years.	59	40	45	34	42	48
Total to 20 years .	139	128	115	104	120	123
Total number of accidents to children under 20 (est.) . .	3,475	3,200	2,875	2,600	3,000	3,075

The main causes of accidents resulting in death in St. Louis are as follows:

	1912	1913	1914	1915	1916	1917
Automobile	21	39	28	43	65	79
Burns	63	36	36	35	35	40
Falls	139	154	135	138	174	120
Steam Railway	59	61	35	26	51	50
Street Railway	43	54	35	28	27	32

Of the 510 fatalities in St. Louis in 1917, 400 were outside of industry and one-half of all these were in the homes.

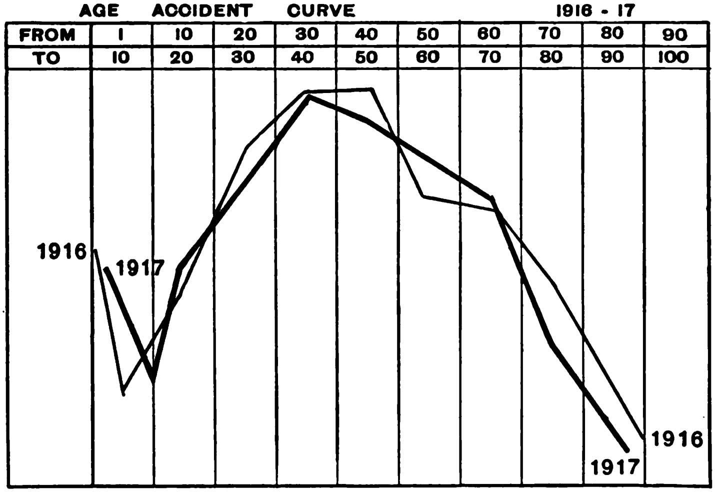
When we consider the great loss of life, permanent injury, and suffering from accidents to children, we can understand the necessity for some definite action to conserve child life; and since these children are in school, teachers and school authorities cannot be held blameless unless the statistics of children's accidents greatly decline. The correction of this serious defect in our social life cannot be left to the home. These data, moreover, become all the more significant, and the teaching body appears all the less excusable for the condition, when it is clear that children's accidents may be largely prevented by teaching children in school certain fundamental ideas about the causes of accidents and by fixing in them safe habits of action on the street and in the home. Children's accidents in the United States have been caused largely by the failure of children to look to the left and to the right in crossing the street, by careless coasting, by playing with matches, by hitching on to wagons, by not observing passing street cars and automobiles, by playing in the streets, and by going swimming without the supervision of older persons.

Our accident record becomes exceedingly significant when we compare the fatalities from accidents and the total accidents in the United States with casualties suffered by the American forces in France. During the nineteen months of our participation in the war, in which we had a maximum of 2,200,000 men in Europe, the total number killed and wounded, including deaths from sickness and other causes, was less than 300,000; while during that period more than 3,000,000 persons were killed or seriously injured by accident in the United States. During the continuance of the war, fewer than 70,000 American soldiers were killed in battle or died of wounds and disease; while approximately 120,000 persons were killed in the United States by accident. About 225,000 Americans were wounded in France, while nearly 3,000,000 were seriously injured by accident during the same time in this country.

A similar comparison may be made between the number of accidents and deaths from accidents in St. Louis and the number of St. Louis soldiers killed and wounded in France. During the nineteen months of the war, fewer than 200 soldiers with homes in St. Louis were killed, while about 800 citizens were killed by accident. The number of St. Louis soldiers wounded was fewer than 800, as compared with 20,000 citizens severely injured by accident during the same period. Nearly as many persons have been killed by automobiles alone in St. Louis during the period of the war as there were St. Louis soldiers killed on the battle fields of France. While these statistics are startling in themselves they are all the more significant when we are aware that most of the accidents are preventable and a large part of them might be eliminated through school instruction.

It is the purpose of the following chapters to point out the way of reducing accidents, with their consequent losses and suffering. This is an effort to indicate how school instruction may serve social ends, and not merely social ends in general, but a specific social end, the prevention of accidents.

The following age accident—curve for St. Louis for the years 1916 and 1917 is typical of what is taking



place generally throughout the country. The curve shows that the large number of deaths — this is also true of non-fatal accidents — occur during the most productive and active years of life, from twenty to fifty. This curve also shows the necessity of fixing ideals and habits of carefulness during the plastic years of school instruction if they are to be developed at all. (Curve from The West at Work, September 28, 1918.)

CHAPTER II

THE JUSTIFICATION OF TEACHING ACCIDENT PREVENTION

From the foregoing discussion it is clear to any one, that there is need of some consistent effort to reduce the number of public accidents. It also appears clear that if the school can do something to this end, it is wholly justified in including in its curriculum instruction designed to decrease the constantly growing number of accidents and deaths. The problem, then, is to determine whether there is a way of introducing instruction in accident prevention that will accomplish the desired object. It is believed that it is not only possible to carry out such a plan of instruction, but that it is entirely in line with modern educational thought. Recent years of educational progress have brought about a transformation in educational theory, and have witnessed a marked tendency to reform educational practice.

We have come to regard education purely with reference to its effect on some form of behavior of the individual. We no longer look upon the function of education as being that of giving information about arithmetic, geography, and the like, but as a means of securing to the individual the right sort of social action, and of developing in the individual the right kinds of feelings, attitudes, points of view, and ideals. We look upon the various subjects in the curriculum as means to these ends.

This new theory of education, which is opposed to the old disciplinary conception, has been making itself felt in the twentieth century in concentrating attention upon the need, in some way, of relating instruction to the pupils in such a way as to bring about a modification of their behavior. At the same time, emphasis has been placed upon *behavior* in its social aspects. Therefore, educational writers and speakers of the twentieth century have put unusual emphasis upon the social aim of education. Educators now usually agree that the outcome of education shall be fixed behavior,— that is, habits, attitudes, ideals, points of view, and sentiments, that will affect the child's behavior. They also agree that the emphasis shall be upon the behavior of the individual in its social bearing.

It is interesting at this point to note the trend of educational discussion whereby this conclusion has been reached. Naturally, the new and unusual interest in scientific psychology, manifested in the latter part of the nineteenth and the twentieth centuries, caused the first discussion to center around the child and the development of the child nature. The first advance toward the present theory was, therefore, a psychological one. As the discussion proceeded, the logical outcome was emphasis upon the curriculum; and the whole recent effort of school men has been to discover means of enriching the curriculum — still later, to enrich the curriculum through socializing the subject-matter of instruction. We are now in the midst of a concerted movement, backed by educators, and even by the United States Government, to introduce the social sciences into the elementary and secondary school curriculum. The National Government recently has taken considerable pains to prepare a series of lessons on community and national life, and to provide material for socializing the curriculum, because of the paucity of such material available for purposes of instruction. These two points of emphasis, the child nature and the subject-matter, represent virtually the progress that has been made in educational theory and practice toward the enlargement of the curriculum and its adaptation to the child for purposes of affecting his behavior in a social way.

There is another element in the educational situation, which has not received sufficient emphasis; indeed, by many it has been neglected altogether. There are conditions in society for which we wish to develop *controls* in the children through school instruction. The important questions to ask and to answer are: What kinds of controls or behavior is the child going to need in the social life to make him an effective individual? Over what sort of situations must he gain mastery? We are practically more concerned with socializing the child, than we are with socializing the curriculum. In fact, we are primarily interested in the child and the social life, and in the conditions he is to master, and only incidentally in the curriculum. We are interested in the curriculum only in so far as it will prepare the child to control his environment now, and as an adult later on. That is, we are actually concerned, among other things, with the health of the child, with his play and recreation, with his bodily vigor, with his vocational information and fitness, with his citizenship, with his voting, with his moral actions, and how he is to control the conditions in society so that he may enjoy an abundant life. We are, interested in the curriculum only, in so far as it will promote good health and bodily vigor, as it will cause individuals to play and enjoy recreation, as it will give vocational fitness, and in so far as it will make for a moral and upright citizenship. The child must know his environment, he must have proper habits and attitudes toward it in order to control it, and the curriculum must serve this function.

This view of education gives point to the teaching of accident prevention. It was shown in the first chapter that there is great need of developing control over the situations that cause accidents. The problem at once becomes that of determining how the curriculum may be made to contribute to that end. If the curriculum does not satisfy the demands of the social situation, then we must revise the curriculum. The revision must look to the development of controls that will enhance the effectiveness of the child in the community and provide for his future.

No single factor has contributed so much to this educational movement, that is to the utilization of instruction to secure proper types of social action, as the *war*, and the effort on the part of educators to meet war demands. When those in charge of the Red Cross, Liberty Loans, and other war activities began to turn to the schools, and to seek a contribution from them toward the carrying on of the war, it looked as if the schools per force would have to devote much of their time to extra-curricular activities. The seriousness of these added demands upon the time of the pupils, the demands for outside activities,—for the schools recognized that they must do their part in the winning of the war,—led them to consider methods of minimizing the effects of these outside demands, and the loss incurred in devoting a large amount of time to war activities. Every teacher in St. Louis is familiar with the outcome of this effort, as the results have been published in "The Manual of War Work of the St. Louis Public Schools," and every teacher has participated in securing these results. Every teacher in the country is more or less familiar with the effect of the war on the schools, as nearly every city has proudly pointed to its achievements, not only in helping to win the war, but to the superior work done at the same time. Teachers have felt the renewed interest and enthusiasm on the part of the children, aroused by a great social motive that gave deeper meaning to curricular instruction. The opinion is unanimous, that instead of the war interfering with the realization of the aims and objects set forth in the curriculum, it vitalized the work of instruction to such an extent that the purposes of the course of study were realized much more effectively than they had ever been. More information has been given, and the information has been so completely tied up with the social activities of the community, that the knowledge gained has been much more valuable to the child than it has been in previous times. In other words, the war activities themselves added new life to the curriculum and thereby vitalized school instruction.

Now that peace has come, and we no longer have the problems of war to vitalize the work of instruction, we naturally turn to our social needs to see whether they will serve the same purpose; whether we cannot tie up the work of instruction with community, national, and even international needs, in such a way as to make the instruction vital. The practical outcome of the war activities in the school has been to prepare teachers to look for social problems, or social needs, as means of socializing the child and vitalizing instruction in the class room. They are ready to use social problems to give meaning to the curriculum and to motivate the work of instruction. We have innumerable problems at hand that will serve this purpose. Among the significant social needs is that of accident prevention.

It is clear, then, from the foregoing discussion that to teach accident prevention we do not have in mind introducing new material as an extra subject, but a method of giving vital content to the regular subjects, and in addition, of realizing social aims. Since it is the fundamental purpose of the curriculum to realize desirable types of behavior in the child, and since it is the purpose of instruction to prepare the pupils for meeting the situations of life, the problem of the teacher and the school administrator is to select the subject matter that will secure these results most effectively. By searching the more modern school curricula, we find they afford the amount, kind, and variety of material necessary for teaching accident prevention. The question arises at once: What are the elements involved in the teaching of accident prevention?

There are no new elements involved in the teaching of accident prevention. In other words, learning how to control oneself on the streets, in the home, and in the factory, and how to escape accidents that usually occur there, is similar to the process involved in learning the correct use of English, or in learning arithmetic. In learning the correct use of English, pupils need to acquire habits, on the one hand, of correct use and, on the other hand, of consciousness of good English form. These habits should be accompanied by a desire to use good English. The whole process then involves habits, and a body of knowledge and ideals. In learning arithmetic, we have a similar situation. One must learn the fundamental processes of addition, subtraction, multiplication, and division of numbers, of both whole numbers and fractions. This is largely a matter of habit. In addition to this one needs a large body of social information, to which he may apply these fundamental processes in the solution of problems.

Learning to avoid accidents and helping others to do so is a matter, on the one hand, of fixing habits of action and, on the other, of becoming conscious of accident situations, as well as of developing attitudes and ideals in relation to the whole problem of accidents, including compensation laws, insurance, and other social practices growing out of accidents. Accident prevention, then, requires a large body of knowledge with appropriate ideals, sentiments, and attitudes.

For instance, we are careful to make the distinction between avoidable accidents and injuries received in the performance of duties. We develop the notion that it is a disgrace to receive a bodily injury that is avoidable or comes through carelessness. The person that receives such an injury is not a hero among his comrades, while a person who displays courage in the presence of danger, when some social end may be served, becomes a hero and is rewarded. It is accident prevention, and that even at the expense of injury to oneself that counts. Such accident prevention makes for constructive citizenship and patriotism.

Before closing this chapter, it is necessary to make clear that the teaching of accident prevention involves two conditions to make it effective. The first condition is to make the teaching concerning accidents a regular and serious part of the instruction in the classroom. No week must go by in which it is not made a problem, in one or more subjects of instruction. While no hard and fast rule can be laid down, and much must be left to the judgment of the teacher, she must have clearly in mind the seriousness of accidents, and the importance of giving the matter constant attention. The success of teaching accident prevention will also depend very largely upon the extent to which the school as a whole, may be organized into a welfare organization that will assume a share in the responsibility for accident prevention in the community. We present in a later chapter a detailed discussion of an effective organization as an example of what can be done in this respect.

This chapter may be closed with a word of emphasis upon the value of this important social matter, as a means of motivating the school work. Even if the instruction in accident prevention should not decrease accidents in the community, it is justifiable purely on the grounds of its value in giving vitality to the work of the classroom. The experience of teachers is that no other thing has offered such a motive, not only for learning to read, but for acquiring the habit of doing the right kind of reading, as the subject of accident prevention. The children become readers of newspapers and magazines, an essential habit for citizens in a modern community. The same value attaches to accident prevention as a means of motivation in English. The fact is, it is an effective means of vitalizing all the subjects of the curriculum, as is made clear in the following chapters.

Without stating the discussion in current educational phraseology, it is clear that the plan proposed for the teaching of accident prevention means a socialized educational process, and the project method of teaching in a nearly ideal form. It is impossible to teach accident prevention without the child's having a purpose underlying his study. The purpose changes the whole attitude of the child toward his work, and leads him to pursue it with vigor and earnestness. It is easy, moreover, to break away from the formal recitation, since this is a new subject matter, and the ostensible purpose of its presentation is the prevention of accidents and the inculcation of ideals of carefulness. The impelling motives make the learning of the formal subjects easy and interesting. Furthermore, the teacher who has once experienced the joy of watching children pursue some difficult piece of work with earnestness, and of observing their growth under the influence of some vital purpose, is apt to seek to make all her work conform to what is the only possible method in the teaching of accident prevention. The formal teacher is sure to become less formal, and the progressive teacher will experience new means of making her schoolroom a living active world, in which the children acquire the experience of life through living; in which these experiences will be organized for the control of situations outside of the schoolroom, that the children will face in their later lives.

CHAPTER III

THE SCOPE OF THE WORK IN ACCIDENT PREVENTION

Generally speaking, in the teaching of accident prevention it is the function of the first four grades of the elementary school to insure the proper development of habits that will promote the safety of children in the home, in the school, and on the streets. The work of these grades centers itself around the following practices which cause accidents: carelessly handling a broken window, not observing a projecting nail, alighting from a street car in the wrong way, careless roller skating, reaching out of a window, trying to recover objects from deep water, hitching on cars and wagons, playing tag on the streets, jumping on and off moving cars, throwing stones or other objects, tripping a person, or removing a chair from under him, holding an umbrella in front of the face in crossing the street, skating on thin ice, neglecting a wound or a scratch, handling fallen wires, leaving matches where mice or rats can get at them, throwing banana peel on street or sidewalk, standing on a rocking chair, carrying a pen or pencil with point exposed, crossing a street in the middle of the block standing in the street while waiting for a car, failing to look both ways when crossing a street, not observing holes in a sidewalk, failing to discover unsafe furnace pipes, and allowing rubbish to accumulate in a basement.

The fact that children are taught to meet these practices habitually in the early grades, does not mean that they are totally neglected in the upper grades, but that the work of the upper grades, in addition to perfecting habits begun in the lower grades, has a very much enlarged scope. For instance, accident insurance, compensation laws, coroners' courts and inquests, accident statistics, safety education and devices in factories, the relation of accident prevention to the public welfare, and the fire losses due to carelessness are all examples of the kind of subjects with which the upper grade child is becoming familiar. It is quite in line with the work of the upper grades to send committees of pupils to witness a coroner's inquest, for example, and to report back to the school the story of the accident. An example of such a report of a seventh grade boy is as follows:

Stenographic notes of the first report made by a seventh grade boy, Jack Dierberger, of a visit to a Coroner's inquest. This report was corrected by pupils and teacher and put into good English form, and delivered as a talk by this boy throughout the school.

Our Trip to the Coroner's Office

Last Friday we received an invitation to attend a coroner's inquest at the Municipal Courts Building, on 14th and Market Streets, three boys, Miss Ryffel, and I.

The coroner met us at the door. He then led us through several small rooms. In these rooms, he said, are held the small cases, not important enough to be held in the coroner's inquest room. He then took us to the coroner's inquest room.

But what is the coroner's inquest? you will ask. It is the investigation into sudden deaths, such as murders and accidental deaths, where there is no doctor present.

The case then began. The coroner took his seat behind a large desk. Then the jury took their seats. One gentleman read the case to the jury. It read like this: "This is the case of Cletus A. Duval, thirteen years old, who was dragged seven blocks by the street car. The boy had his skull fractured, one arm and both legs cut off." Then two boys testified. One said that he and Duval were going to the show. Duval said, "I will take another ride before we go to the show." He then clung to the bars of the window with his feet dangling. The boy saw Duval dragged under, and ran and got his cap, and told Duval's mother. One other man said he saw the body under the car and ran and told the motorman that he had run over somebody. The boy died two hours later. The conductor of the trailer testified. He said he did not see the boy, but the boys in the neighborhood were in the habit of riding cars.

Many of you in this room may not have realized how dangerous it is to hop trailers. We four boys have learned by hearing this case the cost of this dangerous fun.

Won't you join us in fighting this practice, by not doing it yourselves and helping others not to do it?

A committee of seventh or eighth grade children may also be sent to visit a factory, to make a study of the safety methods and safety education, and to report back to the school the methods used there. This report may include the arrangement of the factory, lighting, and other equipment as well as all educational methods used for the protection of the workmen. In this way children are not only acquiring a new point of view about industry, but they are assuming the responsibility of sharing their information with others. Thus, they are building up proper social ideals, and incidentally learning more about life, including arithmetic, language, reading, and all other information necessary for a citizen of a democracy, than they could possibly learn otherwise.

The work of instruction in accident prevention naturally divides itself so that the work can be graded, providing for definite habits, information, ideals, and attitudes for each grade suitable to the development of the child. In the first grade, the home and the school are the chief places of the child's activity; therefore, the lessons on accident prevention should grow out of the activities of the home, and the desire of children to help therein. Also the habits that the school should seek to establish ought to be related to activities in the home, on the way to and from school, and in the school itself. Some of the situations pertinent to this grade are the danger of playing with matches, the necessity of using a handkerchief when sneezing or coughing, the danger of sucking dirty fingers and, therefore, the duty of keeping the hands clean, the correct use of the handkerchief with emphasis upon the incorrect use of it, such as chewing its corners, accidents that arise from tasting candy, fruit, and other articles of food found on the floor or in insanitary places, the disasters arising from tasting things in bottles, etc. The avoidance of running in buildings and of standing on chairs, together with the necessity of watching for the policeman at crossings, are suitable examples for emphatic attention in the first grade. The emphasis should, however, be continued through the later grades, and numerous other accident situations should be added at the discretion of the teacher.

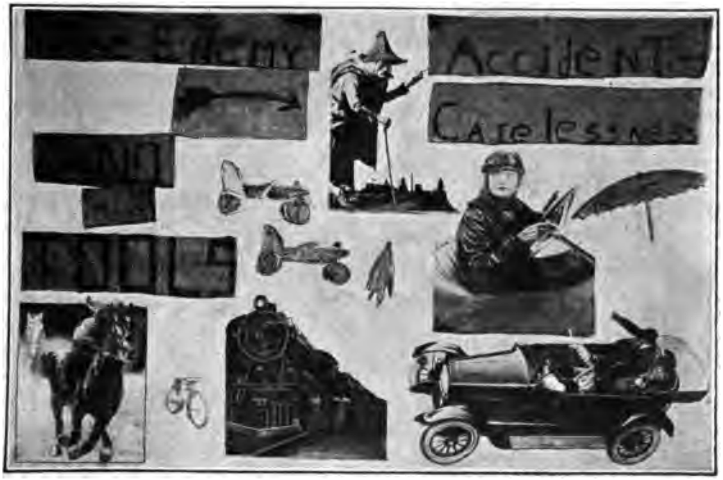
To the home idea of the first grade is added the community idea, as exemplified in the school, in the second grade. As the child comes into this grade, he is more conscious of what is going on around him. Therefore, the effort should be to deal with the accident situations of the first grade pupils, as they affect other children as well as themselves. In these grades the children may be led to construct a city from their own experience and out of materials with which they are working. The teacher can thus lead them to become conscious of the necessity of the clean city, the use of alleys and streets, the wisdom of lighting, and the duties of the policemen at street corners. This is suggested merely as the type of activity that lends itself to first and second grade work.

In the third grade the community idea is broadened through the children's desire to help the younger children at home, in school, and on the streets. Dramatization lends itself to this grade with great effectiveness, as indicated in a later example. The idea of accident prevention may be successfully emphasized in this and other grades, by collecting pictures and pasting them on a large bulletin, showing the soldiers of carelessness opposed to those of carefulness, with succeeding bulletins showing the results of the fight in good health and happiness on the one hand, or misery on the other. This kind of work affords the finest outlet for the constructive instincts of children of this age.

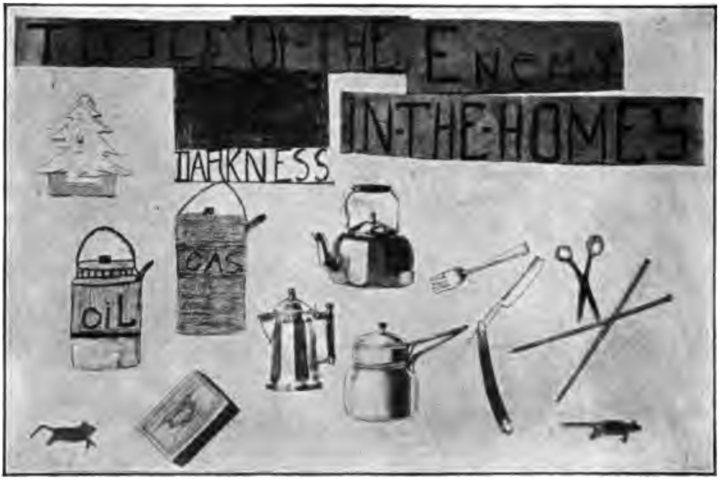
The fourth grade affords opportunity for the expansion of the community idea of the third grade to the children's duty to the neighborhood. In this grade we undertake an enlargement of the views of the preceding grades, keeping in mind the necessity of fixing the habits in all of the situations enumerated above. At the same time, the work of the fourth grade should look forward, toward the fifth grade, in which the whole city is the concern of the child. This plan coincides with the work in geography and history, which concerns itself with the factors in the growth and development of the city or village. At this point the child is not concerned with accidents merely, but with them as a matter of social concern. They are no longer regarded merely as matters of individual suffering and misery and they are no longer studied solely to discover ways of preventing them for that reason, but they become social problems, evils to be eliminated, in order to make possible the highest and best social development.

The sixth grade concerns itself with the industrial life of the city, and accidents that grow out of industrial development, to be followed by the work of the seventh and eighth grades in which accidents are considered as matters of national concern. This brief sketch, showing the development of accident prevention by grades, is not meant to imply that the plan is a hard and fast one. The fact is, that in connection with the geography of the fifth and sixth grades we deal with forest fires, coast accidents, and data of national scope, as well as fire losses in the city. In other words, any plan of teaching accident prevention must be flexible enough to take account of the interests of the children and the presentation of problems as the need arises, and the outline here is only suggestive.

The following compositions were designed by a third grade class, to represent a contest between carelessness the enemy, and carefulness the friend of humanity. Some of the representations are drawings and some are clipped from newspapers and magazines. The work represents a fine drawing exercise in addition to teaching safety. The first composition represents the enemy and his tools:



This composition represents the tools of the enemy in the home. They are the articles that cause the most common accidents.



This composition shows the soldiers of the army of safety. Note the can of paint. One child thought that dark places in the home should be painted white, to make them light and thus avoid falls.

This composition is designed to show the suffering that would result, if the battle is lost in the fight against carelessness.

This composition is designed to indicate the happiness that will result from victory, in the fight against carelessness.

CHAPTER IV

TEACHING ACCIDENT PREVENTION THROUGH LANGUAGE INSTRUCTION

It is the purpose of this chapter to indicate how safety material may be effectively used as a basis of instruction in the mother tongue. The first part of the chapter shows the accident situations that lend themselves best to language instruction, and the second part presents a series of lesson plans, at least one for each grade. It is desirable to have these lessons at regular intervals, perhaps about one lesson each week, so that the subject may be kept constantly before the pupils, and at the same time, not so often that they will lose interest. It has been found that about one lesson each week meets the situation, but this may be varied from time to time. The teacher must keep in mind that accident prevention data may serve two important purposes, first, to vitalize the instruction in English, and second, to prevent accidents. If these ideas are kept constantly in mind, this outline will be very serviceable.

First Grade

Chief purpose of child's activity is helping in the home. How my work can help safety.

  - What I can do.
  - How I can do it.
- How my play can help safety.
  - Where I can play.
  - Where I cannot play.
    - On street car tracks.
    - On railroad tracks.
    - Near quarry.
    - Near river.
  - What I can play with.
  - What I cannot play with.
    - Pointed things, broken glass, jagged cans, hard things, things that might cause fire, explosives.
  - What I must be cautious about.
    - Touching things.
    - Tasting things.
    - Hurting myself on projecting nails, hooks, and broken glass.

Stories should be told by the children, told and read to the children; pictures should be collected by children and teacher.

The slogans for the first and second grades should be provided by the higher grades through competitive exercises.

Circulars and leaflets should be posted in the schoolrooms, and discussed so that the children may get information and inspiration from them for their work.

Second Grade

Child is still helping in the home, but the idea of community life is being brought to his mind.

How my work can help safety.
  What I can do.
  How I can do it.
How my play can help safety.
  What I can play near school.
  What I cannot play near school.
  How I ought to play with other children.
  How I ought to play about the school building.
What I must be cautious about.
  Touching things.
  Tasting things.
  Hurting others.
    In rough games.
    In careless play.
Things that may hurt me and others and that I must watch.
  Fallen wires, banana peel on sidewalk and floor, pins, needles, pens, pencils. I must not hold money in my teeth.

Stories should be told by the children; told and read to the children to be discussed and reproduced. Children's stories are based on their own experience, and the experience of others.

Slogans and plays are provided for this grade by upper grades or middle grades.

Third Grade

Talks by the children, giving directions for crossing street, watching for policeman's signal. To the ideas of first and second grades is added the idea of looking after others, especially the younger children.

How to get home.
How to get to school.
How to play on the street.
Some dangers to be avoided:
  Skating in the street.
  Riding bicycle on sidewalk.
  Playing in railroad yards.
  Jumping on wagons, cars, or automobiles.
  Hitching to wagons or cars.
  Running in front of street cars and automobiles.
  Tripping others.
  Pulling chairs from under others.
  Standing on a rocking chair.
  Holding umbrella before face while crossing street.
  Crossing street in middle of block.
  Standing in street waiting for a car.
  Falling into holes and falling over obstacles in sidewalks.
  Skating on thin ice.
  Playing in deep water.
  Using matches carelessly.
  Carelessness in connection with street cars while getting on, getting off, riding in.

Some tragedies to be called to the attention of children and explained to them:

Poison left standing around: A very sick baby.
A lighted match dropped carelessly: A family without a home.
A rusty nail in a plank: A boy with lockjaw.
A stone thrown carelessly: A boy with only one eye.

Dramatizations of rescues of younger children by older; arranged by the children themselves.

What eight-year old children can do to make home safe, clean, and attractive.

What eight-year old children can do to help the community.

What is the work of the policeman, the janitor, and the fireman; and what can eight-year old children do to help these men who make it their business to help us?

Children of the third grade may be called upon to write slogans for the younger children; to write dramas for them; to write stories to read in the lower rooms; to make safety speeches in the lower rooms.

Fourth Grade

A Review

At this stage of the work, it will be wise to conduct a review of what has been accomplished in the first three grades. The object is to determine how much of a profitable character has become fixed in the minds of the children, and to what extent their conduct is being modified, by the safety teaching in the grades named. The pupils may be able to speak glibly about the lessons they have received, while their conduct is such as to indicate they had never had any safety teaching.

The writing of stories, slogans, dramas.
The making of safety speeches.
Discussion of right and wrong ways of getting on and off street cars.
Proper way of riding in street cars and automobiles.
Dramatization of safety incidents.
What we can do for the home.

Fourth Grade Proper

Watch furnace pipes to see they are not too hot.
Prevent accumulation of rubbish in basement.
What we can do for our school.
What we can do for our neighborhood.
  Help to keep it clean.
  Help to keep it quiet and safe.
What we can do for our own safety.
  Exercise care about playing in the park.
  Exercise care near quarries and bodies of water.

What the neighborhood does for nine-year old children.

Fifth Grade

Statistics on accidents and their prevention.
  Automobile, street car, railroad.
Traffic regulations in the city.
  Reasons for; our duty toward.
Transportation and accidents.
  Early life in your city.
  Development of railroads.
  Street transportation, public and private.
  Water transportation.
Slogans, speeches, etc.

In addition there should be some simple, original work, and investigation with record, in the form of scrap books.

Sixth Grade

Review work of preceding grades.
Discuss the safety movement.
  What has been done for industry.
  What has been done for public accidents.
Discuss accidents in industry.
  How to control them.
Introduction of modern power machinery.
Study the plants of the city.
  How are their workers protected?

Compare your community with others in the city as to accidents.

Comparison of earlier and later times in your city as to accidents.

Comparison between your city and other cities.

(Statistics very necessary.)

Seventh Grade

Lighting and heating of colonial times, compared with lighting and heating of the present.

Invention and development of fire arms.

Transportation of colonial period: stage coach vs. railroad.

Fires; their causes and prevention.

Cost of fire department.

How we can help the fire department.

Safety speeches, slogans, pictures, and stories.

Statistics.

Eighth Grade

Review work of preceding grades.

Forest fires and the loss to the country through them.

History of industrial accidents and the safety movement.

Accident insurance companies; their work and its results.

Economic value of life.

Dangers from explosives.

Duty of eighth grade pupils to school, community, city, nation.

What eighth grade pupils can do for the safety movement, after they go to work or to high school.

MODEL LESSONS

Lesson for First Grade

What are some of the things you can help Mother do?

Can you help Mother by being careful about what you play with?

Might you cause Mother trouble, if you played with fire?

What are some of the bad things that might happen if you played with fire?

Lesson for Second Grade

I heard a sad story the other day about a little baby. Mother was busy and left Little Sister to take care of baby. Baby was cross. He cried and cried, and Little Sister wanted to play with her doll. She thought if Baby had something to amuse himself with she might play with her doll.

Little Sister remembered that she had seen a pretty bottle in the bath room, full of red pills that looked like candy. She thought Baby would stop crying if he had that bottle to play with.

What do you think Little Sister did? She went to the bath room, climbed up on a chair, and took the bottle from the medicine chest. Mother had told her she must never do that.

But Little Sister took the bottle and gave it to Baby. Baby stopped crying at once, and Little Sister began to play with her doll.

After a while Mother wondered why Baby was so quiet, and she came in from her work in the kitchen to see. What do you suppose she found? She found that Baby had shaken the cork out of the bottle and had eaten some of the red pills that looked like candy. They were not candy. They were strong medicine.

In a little while Baby was very sick, and Mother called the doctor. When the doctor came, he looked sad.

Baby was sick for several days, and Little Sister was sorry. She said if Baby would only get well, she would never give him anything again that would hurt him.

Baby is well now and Little Sister remembers. She is always very careful about what she gives him to play with.

How can you be careful, about your little brother or sister?

Will it help Mother for you to be careful?

Lesson for Third Grade

We made up slogans the other day on safety. Now let us tell stories about safety.

Here is a subject for a story: Poison left standing on the floor and a very sick baby.

Who was the baby? Who left the poison? How did the baby get it? Was the baby cured? What did the one who left the poison on the floor promise?

Here is another subject: A stone thrown carelessly and a boy with only one eye.

Who is the boy? Who threw the stone? How did the stone put out the eye? Did the one who threw the stone show that he was sorry?

Lesson for Fourth Grade

Let us make up some slogans on Safety for our room. Do you know what a slogan is? "Do Not Let the Son Go Down," was a slogan in one of the Liberty Bond Campaigns. Another slogan was, "Lend the Way They Fight"; another, "Put the *I Can* in *American*."

Let us make some slogans for Safety for our room, and for the lower rooms, if they want slogans.

A good slogan for children who ride in open street cars in the summer would be, "One Head Inside Is Better than No Head Outside."

Write slogans on the board. Save the best and put them into the children's note books.

A Group Lesson for Fifth Grade.

Oral Preparation: Talk about what children of the fifth grade can do to help smaller children practice safety. Suggest that each write a story on a safety subject, and illustrate the story with two or three pictures.

Oral Composition: The children tell their stories, and describe the pictures they expect to make.

Written Lesson: Children write under supervision of the teacher.

Drawing Lesson: Pictures made.

Criticism Lesson: Stories are read and pictures discussed. Necessary changes made. Best stories and pictures selected.

Pictures illustrating stories selected are made the basis of an oral composition in the lower room. After the children here have told the story the pictures tell to them, the writers of the original stories read their stories. Children in both grades are delighted to compare second stories with originals.

Lesson for Sixth Grade

Did you ever think how our language gets new words? Do you know of a word that is not very old? Why was this word added to our language?

Is *submarine* a new word? What does it mean?

Is *telephone* very old? What does it mean?

Is *automobile* a new word? What does it mean?

Is this name a good one for a machine that carries its own power inside itself?

What are some other words that have *auto* in them? What do these words mean?

You see we get new words whenever we need them. Do you know the words *jay-walk* and *jay-walker?* What does it mean to *jay-walk?* What is a *jay-walker?*

Do people in the country *jay-walk?* Is there more *jay-walking* in the city now than there used to be? Why is this true?

Do you ever *jay-walk?* Do you see any one else *jay-walk?*

Have you heard of any accidents that occurred in your city on account of *jay-walking?* Find out about such accidents and tell the class about them.

Lesson for Seventh Grade

Four-minute speeches about care with fire. The speeches are to be delivered in some of the lower rooms.

What are some of the ways in which fires start in the city? Do fires cause much damage to property? Have lives been lost in fires that you know about?

Can you help to make younger children more careful about fires? How can you do this? Would it be a good thing for you to prepare four-minute speeches which you can deliver to the pupils in the lower rooms? Have you some subject in mind that you think would be good? Here are some subjects that might give you a start:

How Can You Be Careful? (Who is the *you* in this subject?)

The Match and the Mouse; Building a House is Harder than Burning a House. (Give something of cost of labor and material required in building an ordinary home.)

One Way You Can Help Your City (By being careful about fires); Duties of Little Citizens (In connection with care about fires).

Group Lesson for Eighth Grade

General subject: Accident Insurance Companies.

What are these companies?

How extensive is their work?

What are these companies doing for accident prevention?

Which is more important—to pay men who are hurt, or to keep them from getting hurt?

(A group of pupils should report orally or in writing on each of these subjects.)

CHAPTER V

ACCIDENT PREVENTION THROUGH DRAWING

In an earlier chapter we suggested in general the use that may be made of drawing in teaching accident prevention. This subject is peculiarly adapted to such use because the appeal can be made through the eye. The children's drawings, whether they be posters, pennants, buttons, or pictures, can be made only after complete visualization of the accident situation. Like the general plan of the work, the instruction may be presented in one group of grades I-IV, and in another group of grades V-VIII. The general plan of grades I-IV is as follows:

1. Illustration of subjects which lend themselves readily to this form of expression. A drawing or cutting may be used. The following are appropriate subjects:

(*a*) In connection with the home

Caring for the baby.
Helping father or mother.
Games we can play in the house.
Games we can play in the yard.
Cleaning up the yard.
Mending the sidewalk or fence.
Falls that are dangerous.

(*b*) In connection with the streets

Crossing a busy street.
Looking left and right.
Waiting for the policemen.
Crossing in the rain.
Roller skating.
Coasting.
Hitching on to wagons, etc.
Children on bicycles.
Games not to be played in the streets.
Taking younger children to and from school.
Treatment of wires.
Fire: before, during, and after.
Brave and foolish ways of risking life. How we can help in making home, street, school, or community safer.

(*c*) In connection with school

Games we play in the gymnasium.
Games we play on grounds.

2. Subjects which may be carried out as community exercises.

Appropriate subjects:

The children's policeman.
The traffic policemen.
A busy street.
The right way of crossing a street.
The fire.
After the fire.

3. Sand table and construction, using clay, blocks, cardboard, and related materials.

Appropriate subjects:

Play house.
School yard or playground.
A street near the school.
A busy street.
How street accidents happen.

The general plan of work in grades V-VIII is as follows:

1. Free illustration or prose composition may be used in preparation for poster and illustration of books.

Appropriate subjects would depend on the other work, and can not be listed separately. The subjects should be selected by the supervisor and teacher, to suit the needs of instruction.

2. Design.

(*a*) Posters in which a pictorial message makes clearer and more forceful a slogan or other verbal message.

Appropriate subjects:

Dangerous practices.
Slogans made in English exercises.
Announcements of Safety meetings, plays, etc.
Statistics setting forth facts about accidents and their prevention.
Historical material: for example, the menace of fire, accidents in industry.

(*b*) Booklets, newspapers, and library material involving the lettering of labels, titles, headings, etc. The decorative use of safety devices; the planning of margins; the arrangement of illustrations, cartoons, clippings, etc.; and the construction of booklets. Appropriate subjects for this work are newspaper and scrap-books suggested in language exercises, and reference material for lower grades, or to be placed in the school library for future reference.

(*c*) Pennants, badges, etc., may be used in the welfare league as in compositions, and in safety propaganda.

(*d*) Bulletin boards: their value in school community, their placing, and the arrangement of the material on them so as to display posters and announcements in the most effective way.

This general plan is merely suggestive, and will indicate the possibility of using drawing in the teaching of accident prevention. It indicates mainly the large opportunity for work of this kind. The following suggestions for several of the grades as types will point out more specifically how the work of the classroom may be conducted.

LESSONS FOR GRADE II

Lesson I

What are some of the games you like best to play?
Does it take many or few to play your game?

Where is the best place to play it?
Would yours be a safe game to play in the streets?
Let us make a list of games that are great fun, but are not safe to play in the streets.

After numerous games have been suggested through these questions, have the children choose one game from the list, to see how plainly they can tell the story by drawing, or each child may choose his own game, for purposes of illustration.

Lesson II

Can you think of a very busy street?
What are some of the things passing on it?
Are they all going the same way?
Which way are those on the farther side going?
Which way are those on the nearer side going?
Perhaps you see only the front of one auto or wagon, while you see the back of another. Think how the crossing of such a street looks as you are trying to cross it, and make a picture of it.

Lesson for Grade III

Make a poster by free cutting of figures (see illustrations), and by community work in selecting and arranging of the figures. The teacher might introduce this lesson by saying: "You have seen many posters in the school and in the store windows, showing the soldiers or sailors or some one who is helping them to make the world a safe place to live in. Who stays at home and makes it a safe place for us?

Who helps us in safely crossing the street, on the way to and from school?

Couldn't we show by making a poster what our policeman does?

Today we might cut out the picture of a little boy or a little girl coming to school. How would they look if running up to a policeman? How would they look if standing waiting for him to take them across the street?

When you see a policeman today or tomorrow morning, notice how big he is, what kind of coat and cap he wears, and how he cares for the children, so that tomorrow we can each cut a good picture of him.

The size and shape of the background should be chosen, then the cuttings to be used should be prepared and different groupings tried, by pinning the cuttings in place. When the grouping is satisfactory, paste the cuttings in place. If slogans or other words are added, letters may be cut and arranged in the same way.

Lesson for Grade IV

We have talked of what is likely to happen when children or grown people see a broken wire in the street, of the danger of touching such a wire, and of what should be done.

Do little children understand this as well as you?

Can you imagine an electric wire having broken and the end hanging down in the street, just before school is dismissed?

What will the little children want to do?

How can you care for them and prevent an accident?

Can you make a picture that will tell the story so plainly that it would show the little folks what to do?

In your picture who will keep the little folks from crowding up to the wire? Will it require many to keep the children back? Who will run to tell the police?

Where will the little folks be? Try to make these pictures so big, so plain, and so good that we can send them to another room, so that the children will know what to do when they see a broken wire.

Lesson for Grade V

Making a scrap-book

The collecting, the selection, and the assorting of materials may be the work of the Civics, Ethics, and English lessons, while the arranging of clippings on the page, fastening the leaves together, and making cover designs should be the work of the drawing lesson.

Points to be brought out:

1. Trimming edges of clippings and putting them in the best condition for pasting.
2. Arranging items, whether pictorial or printed matter, so that they shall not be crowded or incongruous.
3. Reserving wide margins.
4. Keeping the materials on the pages balanced.

Cover:

Title should be clearly lettered and placed in upper fourth of cover. The decorative unit may be developed from one of the public safety devices and repeated as a border.

Lesson for Grade VI

Care of bulletins in the room

Materials such as clippings, drawings, posters, statistics, etc., will be collected by children. Since there will not be time to discuss them when they are brought, and discussion will be much more effective if all can think them over first, a bulletin board may be used to display them publicly. A committee of the class may take charge of this bulletin board.

Points to be noted:

1. A crowded bulletin board defeats its end.
2. A bulletin board where articles are placed hit or miss at different angles, is not artistic and will not serve its purpose.
3. There should be a good margin, clean edges of paper, grouping of similar items, and a touch of color for special emphasis.

Lesson for Grade VII

Lesson in Detail:

The term *lesson* in this series is used in the broad sense, and does not mean merely one period of work. For instance, the illustration may take the full time planned in the course of study in drawing under the topic free illustration, or prose composition, and the lettering and decoration of the book may take the place of the accustomed Christmas work, since it involves the same principles and processes.

Project

A set of safety readers, to be made by the class as a Christmas present for the first grade. The project involves reading, language, writing, illustrative drawing, decorative and constructive designing.

Teacher's Aims:

1. To make the children intelligent about safety.
2. To encourage an attitude of helpfulness toward the smaller children.
3. To drill on language, spelling, writing, drawing, and design, in the technical points appropriate to the grade, and to give an appreciation of what is good in each.

Children's motive

To make a set of readers, appropriate as a Christmas gift for grade one. These readers are to help the little folks understand accident prevention and, because they are very small children, the work must be excellent in every way, must tell the story clearly, be clean, well made, and beautiful.

Lesson A

This is a reading lesson. The teacher and pupils bring to class clippings, bulletins, pamphlets, and books, or any reading matter dealing with accident prevention. The stories are read with the idea of selecting the ones appropriate for grade I, and the children vote for the selections to be used.

Lesson B

This is a language lesson. It should be a discussion of the material read, and a conclusion as to whether it could be understood by the children of grade I. The points brought out will probably be that the stories are too long and too hard, that the words are too hard, that the pictures are too difficult, and that the printing is harder for the children of grade I to read than script would be.

This discussion will naturally lead the pupils to the discussion of whether they might not make a set of readers for the little folks. If the discussion is properly directed the pupils will decide to make the readers as a Christmas gift.

Lesson C

This lesson should be an English and a drawing exercise. Each child writes a story and illustrates it, choosing a topic which he thinks would be good for grade I. The teacher answers questions but asks none, leaving children free to express their own ideas.

Lesson D

This lesson involves language and drawing. The results of Lesson C are discussed under the captions:

Is the safety idea brought out? Is the story good for grade I, in content and in expression? Does the picture tell the same story as the text?

Lesson E

A number of appropriate topics are suggested by the children and written on the board. The pupils should decide whether each child is to write stories and make a book entirely different from the others; or whether several good stories just alike will be used for each book, with different pictures for each. The children should select their own topics.

Lesson F

The teacher may bring booklets to the class, and the children may discuss and agree upon:

1. Size and shape, taking into consideration the use of the book and the available material.

2. The arrangement of pages, including margins, spacing of illustrations, and writing.

3. The color scheme involving few colors and decorative treatment.

4. The method of binding; Japanese laced book would be appropriate.

Lessons G, H

In these lessons the stories are written and criticised, the content and technical points being kept in mind. The illustrations are drawn and criticised, emphasizing the content and technique. The stories and illustrations are completed.

Lesson I

The cover design is planned. The first point is the title. This must express content, as "safety," "a careful boy or girl," or some similar title; and it must express the style of lettering. The second point — the decorative unit must agree with the title; for example, the danger signal may be indicated by a red lantern, red flags, policeman, or "universal danger emblem." The kind of unit may here be determined, and the teacher should be ready with suggestions and explanations. The third point for consideration is the arrangement of the title, which involves the unit chosen and the color scheme. The letters and decoration should be in appropriate color.

Lesson J

The book is finished. In this lesson there remains to be done the lettering of the title, the application of the unit made, the arrangement of the pages, and the completion of the binding.

Lesson K

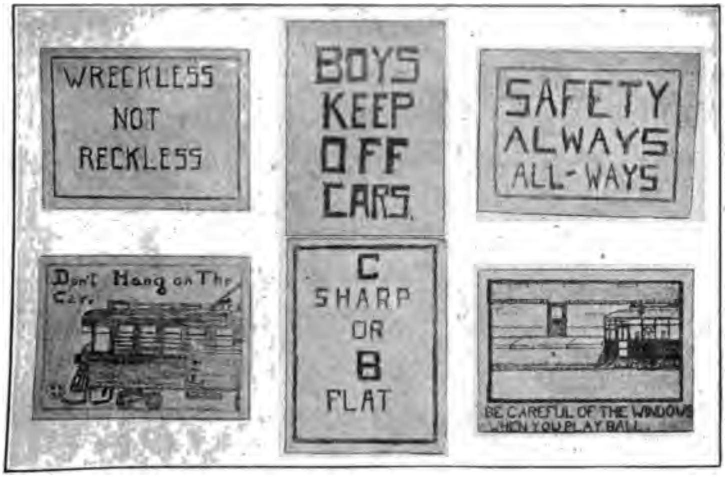
The last lesson should be an exercise in composition, which may be in the form of a note or speech, according to the conditions and needs at the time.

The outline presented above for the seventh grade is an elaborate scheme of combining the work of the various subjects, not only for the purpose of emphasizing the work in the subject itself, but also for a common end, the teaching of accident prevention. Under a competent teacher this can be done with profit, the interest may be maintained throughout, the motive may be stimulating and effective, and the result may be more than the immediate ends desired, in that the pupils' social consciousness may be greatly broadened and enlightened.

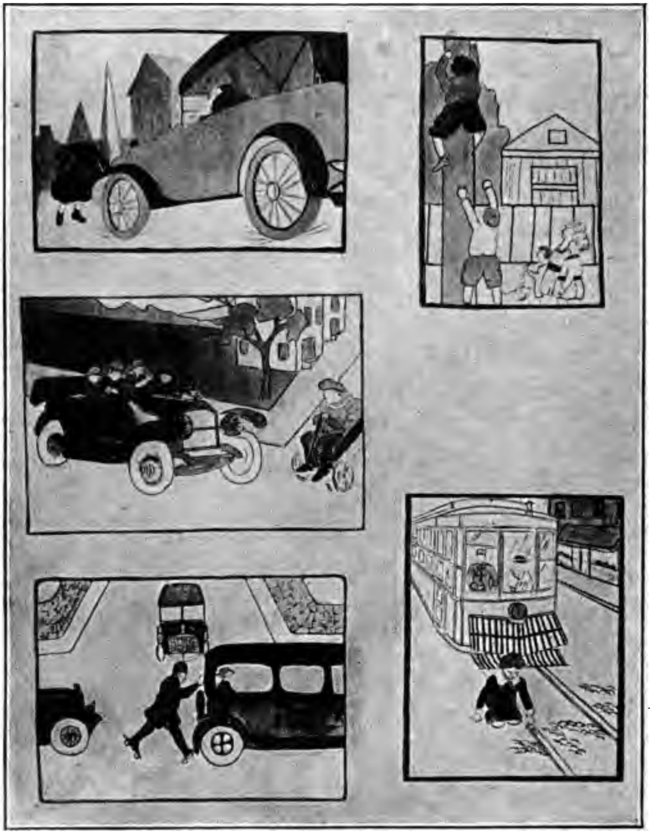
Lesson for Grade VIII

The general subject for this lesson may be the appeal made through posters, bulletins, buttons, badges, pennants, etc. Some pertinent questions are: How are these made to carry their message forcefully? What part does each of the following play: color, contrast, simplicity, background spaces, etc.? The teacher should emphasize the necessity of the picture and the words carrying the same message. The following questions should be kept in mind: Does the placing of a poster, or any of these other appeals, have anything to do with its effectiveness? What can the eighth grade do to forward the movement of accident prevention in this school and in this community?

Posters made by seventh and eighth grade children.



The following picture represents some drawings of accident situations:



CHAPTER VI

ACCIDENT PREVENTION IN ARITHMETIC INSTRUCTION

Accident data may be made more meaningful to children by making them the source of problems. The desired relations can usually be shown best by the method of the table or graph solution. This chapter presents problems typical of the material which may be used to teach the value of accident prevention, in connection with problem solving in the fifth to the eighth grade. It is not desired here to give an exhaustive list of problems. In fact a long list, definitely worked out for each grade, would very largely defeat the function of arithmetic in the teaching of accident prevention, because the greatest value comes through the efforts of the children to gather the statistics from available sources, criticise them, select the appropriate ones, and construct their own problems from them. The problems outlined in this chapter should therefore serve as suggestions, and should be supplementary to the original problems made by the members of the class. We have found that the original problems of the pupils suffice for all purposes, but we have also collected the best of these problems and have made original books, which are left in the library as material for future classes.

The following are some of the problems used in the fifth and sixth grades with success and should, therefore, be suggestive.

Basis of the Lesson:

Germany invaded Belgium and France; "Carelessness" is invading the United States. Compare these statements.

Problems:

1. The number of deaths caused by accidents in St. Louis in 1917 was 510 and in 1918, 420. Have we been successful, to any extent, in fighting our enemy, "Carelessness"? How many more deaths were there in 1917 than in 1918?

2. How many deaths were there in these last two years together?

3. What were the agents working for carelessness? Was the automobile an important enemy?

4. Let us see whether this agent has been a busy worker for many years. Study the table below and draw your own conclusions.

No. of Deaths		No. of Deaths	
1912	21	1916	65
1913	39	1917	79
1914	28	1918	100
1915	43		

5. What was the increase or decrease in the number of deaths from each year to the next? What is the total number of deaths? State the causes of this increase.

6. How many deaths were caused in the last two years together? How does this number compare with those caused in the five previous years?

7. The following table gives the number of deaths caused by accidents to children under ten years of age in the "registration area" of the United States in 1916:

Burns	3220	Cars	161
Drowning . . .	1017	Railroads . . .	241
Automobiles . .	1045	Other Vehicles .	390
Falls	888	All other causes	3572

8. How many children under ten years of age are killed in the United States annually, about how many roughly speaking?

9. About how many more schools, as large as your school would be needed each year if these deaths could be avoided?

In the seventh and eighth grades the same data may be used, but we may include in the process of solution more difficult elements, so that the work will conform to that of those grades. The following problems are appropriate:

1. The number of deaths by accident in St. Louis

in 1916 was 525, in 1918 the number was 420. How much was the number decreased in 1918? What was the per cent of decrease? To what was the decrease due?

2. There were 510 people killed by accident in St. Louis in 1917; 75 of these were children under ten years of age; 48 were from ten to twenty years. What number beyond the age of twenty were killed in 1917? What per cent were beyond twenty years of age? Can the school help to decrease the number? How? Can you help?

3. 10,500 children under ten years of age were killed, by accident, in the United States in 1916. If this number can be decreased by ten per cent in 1919, how many would be saved?

4. If 69,000 United States soldiers were killed or died in Europe during the nineteen months of the war, and 120,000 were killed by accident in the United States, what was the ratio of those killed or died in Europe to those killed in the United States? Can you estimate the relative ages of the soldiers who died and the civilians in this country?

Another series of more difficult problems, solved largely by tables and graphs, are appropriate to these grades. It should be noted that these are the most common forms of problem solution in practical life.

1. Accidents in St. Louis from 1912 to 1917. Find value of question marks.

	1912	1913	1914	1915	1916	1917
Total number	12300	13220	11475	10050	13125	12750
Total number to children	3475	3200	2875	2600	3000	3075
Total number to adults	?	?	?	?	?	?

Draw line graphs showing the relative number for children and adults from 1912 to 1917. What can children do to reduce the number of accidents in St. Louis?

2. Deaths from accidents in St. Louis from 1912 to 1917.

	1912	1913	1914	1915	1916	1917
Total number	492	530	459	402	525	510
Children killed under 10 years of age	80	88	70	70	78	75
Children killed from 10 to 20 years	59	40	45	34	42	48
Adults	?	?	?	?	?	?

Find the value of each question mark by adding, thus in 1912: 9, 3, 12. Write 3. 1, 5, 8, 5, 19. Write 5. 1, 3, 4. Write 3. Answer for 1912 is 353.

What can school children do to reduce this number of deaths in St. Louis?

3. The main causes of fatal accidents in St. Louis.

	1912	1913	1914	1915	1916	1917
Automobiles . . .	21	39	28	43	65	79
Burns	63	36	36	35	35	40
Falls	139	154	135	138	174	120
Steam R. R. . . .	59	61	35	26	51	50
Street R. R. . . .	43	54	35	28	27	32
All others	?	?	?	?	?	?
Total	492	530	459	402	525	510

Find the value of each question mark, by the method suggested in number 2.

Draw a line graph for the automobile accidents.

YEAR	NUMBER OF ACCIDENTS PER 1000 300-DAY WORKERS	NUMBER OF DAYS LOST PER 300-DAY WORKER
1905	300	64.5
1906	214	54.3
1907	189	38.1
1908	150	29.9
1909	174	23.7
1910	134	19.9
1911	112	18.6
1912	153	14.3
1913	115	21.3
1914	74	12.2
1915	48	20.6
1916	96	12.4
1917	85	12.9

4. The foregoing table shows the result of an accident prevention campaign begun in a large steel plant in 1905.

Make a rectangle graph for the number of accidents, and a line graph showing the relative time lost from year to year.

In addition to the wages lost, what other loss was sustained by the worker hurt?

In what way is the company responsible for accidents?

How are the workers responsible?

In what way is it hurtful to the company, if one of its employees has an accident?

5. The following table shows the industrial loss in days in Wisconsin in 1915, 1916, 1917 due to accidents.

Days lost due to death	3,110,280
Days lost due to permanent and partial disability	1,897,700
Days lost due to absence from 1 to 2 weeks .	136,373
Days lost due to absence over 2 weeks . . .	807,485
Total	?

What was the total loss in wages at an average wage of $4.00 per day? What was the average annual loss for the three years?

Did the workmen lose anything in addition to their wages?

Do you think many of these accidents were due to careless habits?

When are careless habits formed?

6. Deaths due to accident in U. S., 1913-1916.

YEAR	DEATHS DUE TO ACCIDENT	IN INDUSTRIAL PLANTS	OUTSIDE INDUSTRIAL PLANTS
1916	75,000	22,000	53,000
1913	67,500	25,000	45,000

Find the per cent of decrease in industrial plants.

How do you account for this?

Find the per cent of increase outside of industrial plants.

What does this mean?

If proper habits can decrease deaths due to accident among employees in factories, etc., would the same habits *increase* the deaths outside of industrial plants?

CHAPTER VII

ACCIDENT PREVENTION IN OTHER SUBJECTS

It is not necessary to go into great detail in pointing out how accident prevention may be taught in other subjects of the school curriculum, because the description of procedure in the subjects already outlined will suggest what may be done in others. Some of the subjects richest in content yet remain, but we need here only mention and point out briefly some of the situations in them of which advantage may be taken. Our whole purpose has been to give suggestions and not to present an exhaustive treatment.

Perhaps one of the most fruitful of the lower grade subjects is that of social or community relations, which is designed to lay the foundation for the beginning of local history in the fourth or fifth grade. We might, for example, present a series of lessons on the policeman as a social agent, as follows:

The Policeman

Aims:

1. To develop in children an appreciative feeling for the policeman, not only as an officer, but as a friend and as a protector in the community.

2. To train little children to wait for the policeman at the crossing, if they live in a neighborhood where there is much traffic.

Point of Departure. Pictures.

1. Traffic policeman.
    - (*a*) The need of a traffic policeman to protect us from accidents from automobiles, trolley cars, wagons, and electric wires, and to prevent congestion.
    - (*b*) The traffic policeman helps by making passage safe at street crossings, by helping little children on stormy days, and by directing automobiles and cars.
    - (*c*) We may help the policeman by instant obedience and by a respectful attitude.
    - (*d*) Note how the traffic policeman is dressed.

2. The policeman on the beat helps by guarding us against wrong-doers, by controlling parades, by preventing crowds, by warning us of fires and street dangers.
    - (*a*) Note how the policeman on the beat dresses, and compare his dress with that of the traffic policeman.

3. Mounted policeman. Note his ways of getting about in the city and in the country. Note the changes in the past few years and explain why.

Another illustration of the possibilities in the study of community relations is shown in the lesson on the fireman.

Aims in the study of the fireman:

1. To teach children to appreciate the fireman and the value of his work in the community.
2. To develop in the child a realization of the loss and suffering caused by fire.
3. To teach him to guard against accidents arising from carelessness connected with fire.
    (*a*) Duties of the fireman: to respond to alarms, to extinguish fires, and to rescue persons from burning buildings.
    (*b*) Fires that have come within the children's experiences, resulting in the loss of life and property.
    (*c*) How we may guard against fires in our homes. We can prevent fires by avoiding the accumulation of rubbish, by watching electric wires, by being careful in the use of matches, by avoiding overheating the furnace, and by guarding open fire places.
    (*d*) The dress of the fireman: rubber coat, helmet, and boots.

History is another fruitful subject for the teaching of accident prevention. With the beginning of local history, take up the study of fire as one of the greatest material blessings, when properly used, and one of the most disastrous destroyers, when not controlled. The following outline will provide lessons for several days:

Fire

The aim of this lesson is to acquaint the pupils with the dangers to life and property from fire and to give them some knowledge of the way in which the people of the city or community may protect themselves from these dangers. It is also desired that the pupils learn the causes of fire and become interested, as members of the community, in preventing losses from fire.

Begin the lesson with contributions from the experience of the children, concerning causes of, losses and injuries from, and methods of fighting fire. Every member of the class should make a contribution to this discussion.

With this introduction, direct the attention of the child to the past, pointing out the great values as well as the dangers of fire.

There was a time, ages and ages ago, when men did not have fire. That was long before our ancestors came to this country, long before our cities were even thought of. Then people had to live through the cold winter without the warmth of fire, and they could not cook their food. How would you like to have lived at that time?

How did men discover the use of fire? Nobody knows. Perhaps the first man to use fire discovered a burning tree or log, that had been struck by lightning, or kindled in some other way by nature. From this he carried coals to his cave, or wherever he lived, and built a fire of his own; or men may merely have gathered about a fire that they had found and warmed themselves. This first fire must have been guarded very carefully, because men did not know how to make a fire themselves. It has been reported that there are people living today who are in this condition. They have fire and they know how to use it, but they do not know how to produce it. Have the pupils enumerate the values of fire.

Finally, the time came when man learned how to make fire by rubbing sticks of wood together. Has any member of the class ever seen this done? Another method, learned long ago, is that of striking one piece of flint against another or against a piece of steel. Our ancestors used the latter method to make fire. Just imagine how inconvenient it would be, if we had to use a clumsy method like that, every time we wished to build a fire.

The common friction match was invented in 1827, and before the middle of the century people were using them. Thus, men are now able to produce fire with little difficulty, and this tremendously useful natural force is a servant of men. How has the friction match increased the dangers from fire?

But, as we all know, fire is dangerous as well as useful. Sometimes fire gets out of man's control, and then it becomes very destructive. Houses, factories, and cities may be burned down. Great forests and thousands of acres of grass and hay, on the prairies may be destroyed, and many people may lose their lives or be badly burned. So, in bringing fire into his dwelling, man has brought in an enemy, as well as a friend.

Many people are careless and fires get started. To meet this situation people, from the earliest times, have banded together to fight and to control these fires. How do fires get started?

During the frontier life, in case of fire, father, mother, and children turned out and fought the fire in any way they could. Some carried water from the spring and threw it upon the fire, while others busied themselves with removing the family's belongings from the burning house. Of course, the neighbors, if there were any, gladly came to help in the fight against the common enemy.

In early times a more systematic effort was made to protect the growing city against fire. The fire brigade was formed, a group of men who, in addition to their regular occupations, volunteered to fight fires, wherever and whenever they occurred. Why would this system not do for a city today?

From this crude beginning there has developed, with the growth of the city, the elaborate system of fire protection of the present, with its central and branch fire stations, its well-paid and trained force of firemen, its expensive and effective equipment for fighting fires, its system of fire alarms, its laws regulating the construction of buildings and fire escapes, and provisions for fire insurance. Discuss the advantage of these features. Compare the present dangers with the dangers in early times. Have reports on each of these features of the fire protection system. Enumerate again the causes of fire.

History affords an unusual variety of subjects that lend themselves to our purpose. Such topics as insurance, including fire, automobile, accident, industrial, etc., might be considered in their historical development and afford as valuable material for study as military or political history. In fact the study of industry and agriculture, or even the study of accidents themselves, as historical material, is invaluable for the youth from whom is to be built up the citizenship of the modern complex community.

Geography also lends itself readily to our purpose, in the consideration of accidents in their national scope. If we are studying the coast states, the life saving means may be studied. If on the other hand, we are studying the great wooded regions of the west, the problem of importance is that of fire prevention, and the damage of forest fires to life and property. If, moreover, we are studying the agricultural plains of the central Mississippi Valley, it is natural to point out the accidents on the farms and in the country homes. When we are considering industrial and commercial geography, we can utilize the situations afforded to develop right attitudes toward industrial accidents. From the foregoing, it may readily be seen that the subject of geography is full of situations that make the teaching of accidents easy and inviting.

We have found that even in the teaching of penmanship, letters to the principal, the teachers, or friends have afforded not only the finest opportunity, but the best motive possible, for the teaching of the art. The subject that would otherwise be drudgery is given life and the improvement in writing is marked.

Finally, the subject of reading may not only be motivated, but may lead to social habits of the most vital kind, by the introduction of accidental material. The source of unlimited material may be found in the magazines and newspapers, and while the children are searching for subject matter that is worth while to bring to their fellows, they are at the same time acquiring a very useful social habit, that is, reading current periodicals for practical information.

This brief survey of the different subjects of instruction is meant merely to show how, while teaching the mechanics of the subject itself, we can develop attitudes and ideals that will affect the whole conduct of the child in relation to accidents. We do not even contend that we have selected the best examples of what might be done, but we have given concrete illustrations, and the inventive teacher will supply numerous others that will answer her purpose. In the succeeding chapters we will show how we carry out our programs as outlined in the preceding pages.

CHAPTER VIII

STENOGRAPHIC REPORT OF TYPICAL LESSONS IN ACCIDENT PREVENTION IN THE WYMAN SCHOOL

The purpose of this chapter is to give a concrete illustration of the work in accident prevention, as carried out in one school. This is not presented as an ideal plan, but simply to show how the teaching of accident prevention works out in practice. Quite different lessons might be seen if these classes were visited now. From our experience we are constantly changing. Moreover, new problems and new subject matter add new interest.

Lesson in Arithmetic in the Seventh Grade

The following represents a lesson in arithmetic, for the first and second quarter of the seventh grade, and the problems here presented are those made by the children.

1. If there are 700,000 people in St. Louis and 510 are killed by accident, how many would be left? What per cent are killed?

2. One hundred people are killed by automobiles and 37 by street cars. If four times the number killed by automobiles are killed in other ways, how

many people will be left out of a population of 700,000? What percent would be killed?

3. There were 420 people killed in St. Louis in the year 1918. If this number could be cut down 10 percent by accident prevention, how many people will be killed in the year 1919?

4. If the population of the United States was 91,972,266 in 1910 and the accidental deaths from public and industrial accident are 77,000 annually, to what would the population of the United States be reduced by accidents alone in ten years, if the population did not increase.

When the pupils who presented these problems were asked from what source they received the data upon which the problems were based, they replied that they got the statistics from the reading, the language, and the history classes. The discussion of the problems which took place in the classroom is omitted here, as the plan of procedure is presented in another chapter, and does not need to be repeated.

Drawing Lesson in the Eighth Grade

A drawing lesson with the children of the eighth grade, for the purpose of designing posters, buttons, pennants, slogans, etc., to advertise accident prevention throughout the school, resulted in some fine work from which the following are taken:

A drawing of an American flag with the slogan, "MAKE IT STAND FOR SAFETY."

Slogan, "One man at work is worth two in a hospital."

Slogan, "DON'T TASTE EVERYTHING YOU SEE, SAFETY FIRST." This slogan was on a poster with the picture of a child on a chair drinking from a bottle taken from a medicine shelf.

Slogan, "ANY FOOL CAN BE CARELESS."

Picture of a fireman, and the slogan, "If you smoke, OUTSIDE with you."

These pupils had been addressed at the morning assembly by Mr. C. W. Price, General Manager of the National Safety Council, on accident prevention, and they were beginning to represent his speech to the whole school through drawings and slogans.

Reading Lesson in the Seventh Grade

A reading lesson with the children of the third and fourth quarters of the seventh grade, who used articles clipped from magazines and newspapers which the children themselves had selected. The entire room had clippings and were eager to read. The motive for the reading was the desire of the pupil to bring to the class what he considered useful information, and to leave his selection as a heritage for other classes. After each pupil had read and the article had been discussed, the class voted as to whether they wished the item preserved for other classes. A committee pasted the articles chosen into a scrap book made in the drawing class and, when the book was completed, it was placed in the library. In the preparation of this lesson the pupils had read widely from the periodical press.

An English Lesson in the Seventh Grade

An English lesson with the pupils of the seventh grade, for the purpose of preparing oral speeches to be delivered to pupils of other rooms, to the assembly at the Wyman School, and at the College. Each speech was followed by criticism by pupils and teacher in a frankly good-natured manner. One of the speeches by Ida Lacey, a twelve-year-old girl, which the children voted should be made throughout the school was "The Difference Between War's Casualties and Those Resulting from Accidents," and was as follows:

"There is something at this present time that must be taken care of, something that if not prevented will cause great sorrow and suffering. The boys, returning from the dangers and horrors of war, hope, long for, the safety and quietude of peace. Is this country safe for them? It is certainly not safe when two hundred and twenty-five men, women, and children die each day from causes most of which are preventable. If you can picture five schoolrooms, each containing forty-five lifeless persons whom you might have kept healthy, helpful citizens of the United

States, then you have some idea of what goes on in this country each day. We know that some of our valiant boys will not return while others will come back cripples. But there is a very great reason for this, a reason that will never in the history of the world be forgotten. Every day we see in the paper the list of glory, the list of those who died that we might live and live better. It is only just and fair that we do our utmost to improve our country by saving the lives for which our soldiers died.

"The boy who in a careless hurry and flurry loses an arm, is he to be classed with the soldier who gave his arm? Was there a reason for him to rush heedlessly across the street to arrive at, not his destination, but an accident? He paid dearly for his act, and his parents will feel the loss as much and more than the boy himself. The man who hit the boy is to be considered. He will have the memory of it all stamped before his eyes for years. The parents, the man, and others had really nothing to do with the accident, but still they carry the responsibility.

"Now look at the wounded soldier. At first sight of him, the loving old mother feels a shudder passing over her, and then quickly quite another feeling prevails, a feeling of pride and respect for that brave boy of hers. Everyone that sees the boy shares her feelings. He is welcome wherever he goes. Now compare these two boys that I have mentioned. See the numerous things they prove, among which one stands out strongly: that bravery or courage does not mean carelessness.

"During the last war the government found the people ever ready and willing to help. Now that this great question has come to the fore, the question of safety, can't we see our duty and do it? A tedious battle has been fought and won, and now this battle also must be fought and won. We will be fighting in more than a just cause, fighting because people of our country are being killed by that ever prevalent tyrant, Carelessness. When we hear that people of our own nation, our brothers, are being killed, don't we feel a stirring, a quivering about us, a resolve to do our part in the work? We fought to make the world safe. We have heard that expression time and time again, and to a certain extent that has been successfully carried out, but not quite. While people suffer death caused by a tyrant, we have not finished. When we entered the last war, we went to work with the idea of winning. Very soon we saw something else. We saw that we must win quickly. As soon as this thought took root, things began to change. Very soon victory was ours! Just so it will be in this case. The sooner we get at this thing the better. But remember, place Safety First, first safely in your own mind, and then in the minds of those about you."

Geography Lesson in the Sixth Grade

A geography class in the sixth grade discussed the safety devices used by our government on the coasts. The teacher read newspaper articles about a wreck on the Atlantic coast describing a light ship out on the rocks. She explained that one of the chief objections to German submarine warfare was the destruction of lightships, which guard dangerous places along the coast. There were drawings on the board, showing the Lyle coast gun, breeches buoy, life boat, life-boat carriage, and showing also that boats are lodged high above the shore line, at the top of the run-way, so that they can be easily sent to the rescue. A child explained the drawing of the Lyle gun and how it functions. "The gun has a projectile, to which a rope is attached. The projectile is shot to the wreck, a stouter rope is attached to the end of the flying rope, and the work of rescue goes on."

The following table had been written on the board, giving information concerning the United States Life Saving Department:

Coast Guard Statistics

Shipwrecked in past 36 years 121,000
Lost—1%, or 1,210. Saved 119,790
13 districts: 9 on Atlantic, 3 on Great Lakes, 1 on Pacific.

Life Boat

25 to 27 ft. long; carries 12 to 15 persons besides crew of 7. Air cases in end and sides. Insubmersible, righted in 20 seconds. Self bailing. Carries large anchor. Grapnel, to fasten to wreck. Rope cable. Compass. Hand lights. Oars, blue and white. Sails. Motor.

Signals

Green, assistance coming.
White cartridge, recall.
Red hand lights, more assistance.
2 red rockets, assemble crew.
Green hand lights, someone coming.

The Crew

Keeper, $1,000 per year.
6 or 8 surfmen, $65 per month (August to May); Pacific, all year.
Men drill every day. Keep watch on lookout by day, patrol by night.

Arithmetic Lesson in the Sixth Grade

An arithmetic lesson with children of the sixth grade considered the causes of fire, and fire losses.

Problems on fire losses.

Annual Fire Losses in United States

1. The fire losses in the United States average about $250,000,000 a year. About $57,500,000 was lost by unavoidable fires. How much could have been saved if people had been more careful?
2. Estimate that result in round numbers.
3. What part of the First Liberty Loan would that have paid? What part of the Fourth?

Fire Losses in St. Louis in 1918

1. The losses for 1918 are estimated at $2,474,555, which is $346,997 more than the losses for 1917. What were our losses in 1917?
2. Estimate this in round numbers.
3. The St. Louis losses are about what part of our national losses?
4. What was the average loss per week in St. Louis in 1918?
5. What was the average loss per day in 1918?

Penmanship and English Lessons in the Fifth Grade

In the fifth grade a lesson in penmanship was used to impress the importance of accident prevention. The children wrote letters to the principal, telling about the need of safety, their interest in it, and how they were going to assist him in making their school the safest in the city.

Then followed an English lesson with the children of the fifth grade. This was the third lesson of a series dealing with the following topics:

1. A development lesson in which home accidents were discussed.
2. Drawing for purposes of illustrating the accidents discussed in lesson one.
3. Stories told from the pictures the children had drawn, each child telling a story from his own picture.

In talking from the pictures, each child pinned his picture on a board before the pupils, and told the story of the picture. As we entered the room, one child was telling the story of a fire in the home, which was illustrated by a drawing of the accident, which she had drawn herself. (In taking down her picture, one child put a thumb tack in her mouth, for which she was reproved by a classmate, because it was against the principles of safety.)

Another child told the true story of a boy and girl, who were playing. The girl was swinging, and the boy was playing with an air rifle. The boy, not knowing that the rifle was loaded, pointed it at his sister and said, "I will give you three seconds to get out of that swing. Then I'll shoot." When she did not give up her swing, he shot and killed her. This story illustrated the wrong use of firearms.

A story was told of the carelessness of Mrs. Jones, who was thinking of coming guests, while ironing, and who set fire to the room by allowing the iron to rest on the clothes.

Another accident which occurred in the home was that of a boy who fell into a boiler of hot water and was killed. The mother was washing clothes and placed a boiler on the floor, when her husband called her to help him with a troublesome stove pipe. The boy was having a good time jumping over the boiler, until he made a miscalculation and fell into the water. The doctor who was called in to treat the boy said that he was unable to do anything for him.

Each child had prepared a poster, and was ready to make a talk about his own picture.

Various Lessons

The children of one fourth grade class were sent to the corridor to study posters drawn by the pupils of the eighth grade. They studied these pictures, and were allowed to tell their own experiences suggested by the posters.

Another fourth grade group was taking an examination on subjects such as streets, water works, fire department, etc. in St. Louis. The following are the questions which the children were answering:

1. Why does St. Louis spend money for traffic policemen, safety zones, and safety zone posts?
2. Why does the city send out health bulletins to the people?
3. Why is the water taken from the river, twelve miles above the city?
4. Explain why St. Louis is laying out play grounds all over the city.

The drawing work of the children was placed around the room, showing the scenes of Old St. Louis, the safety devices used when St. Louis was a trading post.

Another group of fourth grade children had a language lesson, consisting of wholly new work. This was a conversation lesson, regarding problems which the child meets in taking care of himself on the streets, in the home, etc. The purpose was to prepare speeches to be delivered to lower grade rooms. They were discussing the child who lived on a nearby street, and were considering how the child would go home without getting hurt.

A boy from the eighth grade gave the following safty talk to the children of the third grade:

The Casualty List of War as Compared with the Casualty List of Accidents

By Paul Freund

Do you read the newspapers? Have you noticed how many accidents happen daily that might have been avoided? Not one day passes but what someone is either seriously hurt or meets death simply through carelessness. We used to think that accidents were necessary, but now we know that it is not only possible to prevent them, but that it is our duty to do so.

Someone might ask, "What can I do?" "How can I help to promote safety?" Your teachers have given you safety rules which you should follow. Knowing them is not enough. You must use them. If the simple rule, *Always be careful,* be followed on the street, in the home, and at school, what a number of accidents might be avoided. We should be constantly on the alert, not only in regard to our safety but in regard to the safety of others.

I am afraid some of us do not realize how important this safety movement really is. Let me quote some statistics to prove to you the seriousness of this matter. We think that the number of deaths in our army was great. Yes, it was great, sixty thousand. But think of it; in the year nineteen hundred seventeen, seventy-five thousand lost their lives through accident. Fifteen thousand more than in this great war. It is also estimated that one out of every eight persons in the United States is injured yearly. And when we know that war's casualties were necessary, while those from accidents were not, will we sit by without an effort to reduce that number? Think of your own family. Would you want one of them crippled for life, possibly through your negligence? It is a fact that the greatest number of accidents occur in the home and on the street. Out of twenty-nine thousand accidents in Chicago, fifteen thousand occurred in the home.

Thousands of others will meet a similar fate unless we all unite to help free the county of avoidable accidents. By the combined efforts of men, women, and children, we won this war on autocracy. By the combined efforts of all of us, we shall win this great war on accidents.

The following is an English lesson in which children of the third grade presented a play on safety, which they had written themselves:

A Lesson for All

Characters in Play

Mr. Nierman, the father.
Mrs. Nierman, the mother.
Lorene and Ralph, the two children
Lucy, the maid.
Eileen, a passenger in the street car.
Oliver and Wayne, two ambulance drivers.
Bernard, a traffic policeman.
William and Edward, motorman and conductor on the street car.

Nurse.
Doctor.
Three careless patients.

Scene I. Living room in Mr. Nierman's home.
Time. After breakfast.

Mr. Nierman. "Mother, do you know if the paper has come?"

Mrs. Nierman. "No, I don't, but will call Lucy. Lucy, Oh Lucy."

(Lucy enters). "Did you call, Mrs. Nierman?"

Mrs. Nierman. "Yes. I called. Will you please go and see if the paper has come?"

Lucy. "Yes, ma'am." (Lucy goes to the front door.) "Dear me! The boy is late. I see him coming now."

Paper boy. "Here is your paper."

Lucy (taking the paper to Mr. Nierman). "Here is your paper, Mr. Nierman. It just came."

Mr. Nierman. "Thank you, Lucy."

Mrs. Nierman. "Is there anything important in the paper?"

Mr. Nierman. "I see there are thousands of cases of influenza this year."

Mrs. Nierman. "Isn't that dreadful? More people died of it than in the war."

Mr. Nierman. "Yes, and even more died from accidents. It's time we warned our children to be careful."

Ralph. "I am tired reading this book. Come on, sister Let us go out and play."

Lorene. "Wait a minute, until I put my dolly to sleep. (Sings.)

"My dolly, my dolly."
"Now go to sleep, my dolly dear."
"I think she is asleep now. Come on, Ralph."

Ralph. "All right. I'll walk softly so as not to wake her."

Lorene. "Let us hurry."

Mr. N. "Be careful, children, and don't play in the street. Keep your wagon on the sidewalk."

Scene II. Grand Avenue and Park. (A very busy and
dangerous corner.)
Time. An hour later.

(Traffic Policeman blows whistle and raises arms for cars to pass.)

Lorene. "Oh! Ralph, we can't cross the street now!"

Ralph. "Oh, yes, we can." (He dashes into the street, dragging the little wagon in which Lorene is seated.)

Lorene. "Hurry, Ralph, hurry!"

Motorman (ringing bell—ding-ding). "I can't stop this car." (The car strikes the little wagon with Lorene in it. She is thrown out and badly hurt. Ralph begins to cry.)

Eileen. (Passenger.) "Oh, I do hope the child is not hurt. Come on, little boy; there is no use crying now. I will take you home and tell your poor mother."

Ralph. "What are you going to do with Lorene?"

Traffic Policeman. "I will go and call up the ambulance." (He runs to the police box and calls for an ambulance, which arrives quickly.)

First Driver. "What has happened now?"

Policeman. "A little boy was careless, and a street car struck his little wagon, and the little girl was badly hurt."

Second Driver. "We must hurry. Help me to put her in the ambulance."

Policeman. "It seems to me there are more accidents every day. I do wish these children would be careful."

Scene III. Hospital.
Time. A few minutes later.

First Driver. "Here we are, nurse."

Nurse. "What has happened to this patient?"

Second Driver. "This little girl was hurt."

Nurse. "Put her in this bed and send the doctor in."

Doctor (enters). "Hello, Nurse! What have we here?"

Nurse. "We have three careless patients."

Doctor. "Mmmmmm!! More accidents, I see."

Nurse. "Yes, I am ashamed to say so."

Doctor. "I will take a look at them."

Nurse. "Yes, do."

Doctor (to first patient). "What are your troubles?"

First Patient. "I was striking a match, and my dress caught on fire, and I burned my arm. Just look at it."

Doctor (shaking his head). "That was pretty careless. I will bind it up."

Nurse. "Come, look at this patient, Doctor."

Doctor. "What has happened to you?"

Second Patient. "Oh! I was going across the street when an automobile hit me in the head. I do feel so bad!"

Doctor. "I should say so. Hit on the head! That is a bad place. What are your eyes for? Didn't you see the auto?"

Second Patient. "No, I wasn't looking."

Doctor. "Well, you ought to look."

Second Patient. "I will next time."

Doctor. "Let me look at the new patient, Nurse."

Nurse. "Here she is, Doctor."

Doctor. "Dear, dear, that looks bad. How did this happen?"

Nurse. "Her brother was drawing her across the street in a little wagon when a car struck it."

Doctor (binding up the head). "These accidents must stop. This is a bad case."

Nurse. "Yes, it is."

Doctor. "Little girl, be careful next time."

Lorene. "I will."

Doctor. "Well, nurse, no wonder they call us 'Careless America.' "

Nurse. "Yes, and I think it would be far better if we were called 'Careful America.' "

Doctor. "I think so, too, nurse. I will be back tonight to see my patients. Give them a pill after each meal."

Nurse. "All right, Doctor, goodbye."

Doctor. "Goodbye, Nurse."

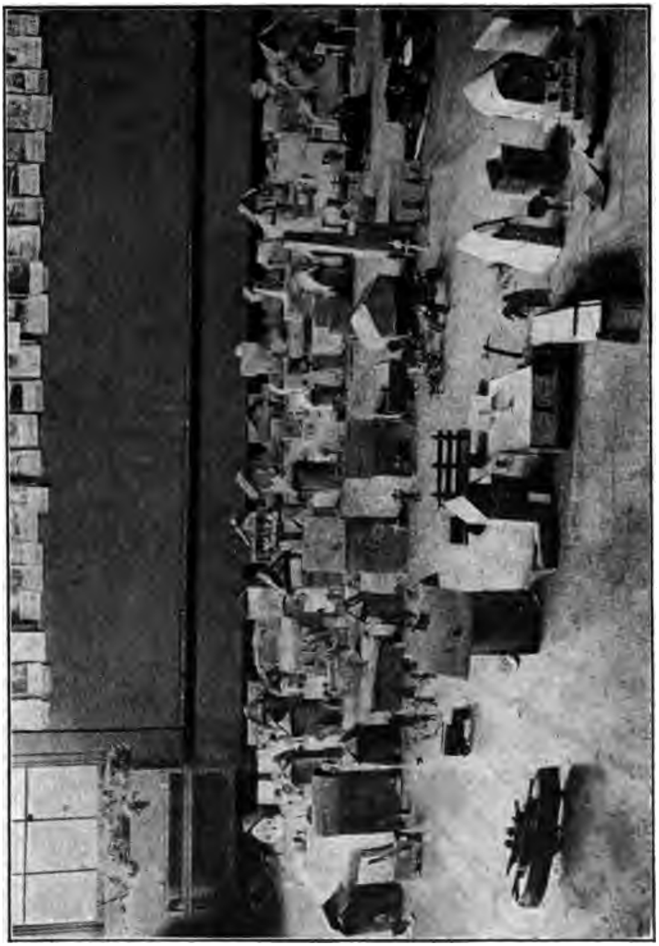
In a second grade room, the children were making posters showing how the policeman helped the children across the street. They were printing on the poster the slogan: WATCH THE POLICEMAN.

In the first grade, the work of the children was continued over a period of several days in drawing, language, and construction with special reference to safety instruction. The children had made a miniature city of St. Louis of cardboard houses, theatres, schools, etc., using such toys as they had to complete the city, such as railroad tracks, doll houses, boats, and autos. The city included a Hotel Statler, the Wyman School, the Teachers College, Pevely Dairy, Union Station, fire engine houses, lamp posts, railroad tracks, factories along the river, and the residential districts in the west end, for which the children used the best looking doll houses to represent the better residences of that section. In building the city on the schoolroom floor, the problem of the best place for the lamp posts was discussed. They decided to place them so that no part of the city would be dark and thereby afford shelter for robbers. The children decided that they ought to have a fire department to make the city safe. While speaking with a visitor, the teacher brushed against a theatre and almost upset it. The visitor asked the children what was the danger. They replied that many people would be killed if such a thing should happen in the city.

The picture of a miniature St. Louis constructed by the children of the first grade on the schoolroom floor for purposes of teaching accident prevention, at the same time meeting the requirements of the regular work in drawing, language, and construction.

The graduating class on the day of this report was taking a final examination on accident prevention and the following is the list of questions submitted:

1. Describe the correct way to get on and off a street car.
2. What must you do on the discovery of a broken wire?
3. What is the danger of spitting in public places?
4. Name five public safety devices with which you are acquainted.
5. What may the automobilist reasonably expect of the pedestrian?



A Miniature St. Louis

6. Give one important precaution in the handling of fire-arms.
7. Tell how to call the fire department.
8. What is the location of the box nearest your home?
9. What number do you call for the police?
10. Name five ways by which you can distinguish a careful person.

At the same time another section of the eighth grade was holding a meeting of the improvement society. The secretary read the report of the last meeting. Then the chairman called for the report of the safety committee. The committee had just been appointed and the chairman gave rules that had been formulated to insure the reduction of accidents in the school buildings, in the yard, or in going to and from school. A few of these rules follow:

1. Always *walk* in the halls. Do not run.
2. In going up stairs take one step at a time.
3. Report any repairs needed.
4. Do not play with a sharp piece of tin in hand, etc.

Finally, a safety program was presented by pupils to an auditorium session in which one room presented readings; a second, speeches, and a third, a pantomime. The latter will be given in the next chapter.

CHAPTER IX

WYMAN SCHOOL ACCIDENT PREVENTION PROGRAM IN PANTOMIME

This chapter presents a program worked out by the pupils of the Wyman school and presented at an auditorium session just as they conceived it. The introductory remarks were made by a pupil of the eighth grade, Charles Dillon, who was chairman of the meeting. The program represents, without any polishing, what might be seen at any session. The text is a stenographic report of the remarks made in explanation of the pantomime, and the pictures were taken on the day of the presentation.

"We know that the safety movement, which we are emphasizing at the present time, is an exceedingly important one. From facts that have been read to us, or that we have read, we readily see that many fatalities are caused by carelessness. In order that the number of fatalities may be lessened, the pupils of the Wyman school have formed safety committees, whose duty it is to inspire the pupils to greater efforts, in following the safety movement. A fifth grade class will now present to you in pantomime some safety lessons they have learned. They first will show you means of preventing disease.

"Science has shown us that disease is caused in a great measure by germs that have collected on the hands during play or work, which can easily be carried on the food to the stomach, where they can get in their deadly work. In the first picture you will see a little boy with dirty hands ready to eat his dinner, but his parents are too wise. See what they do."

The scene depicts a family of three, the father, mother, and boy, ready to partake of their meal. The parents notice that the boy's hands are dirty and send him to wash them. He leaves the table, washes his hands, and returns to show his parents that his hands are clean. He is then permitted to eat his dinner.

Cleaning Teeth After Meals

"Another way that the spread of disease can be prevented is by brushing the teeth after meals. This is equally as important as washing the hands before meals. Germs lodged in the crevices between the teeth can thus be exterminated. Let us see if the boy in the next picture has learned this lesson."

The boy is shown brushing his teeth.

A boy opening the windows in his room before retiring. He opens them from the top.

Proper Ventilation

"No person can be healthy unless be breathes pure air. How is he to get it, when he is not out in the open? By having the room he is in properly ventilated. We usually see to that during the day; but it is of great importance that we have fresh air to breathe during our sleeping hours. The next picture will show you what should be done before retiring for the night."

The Use of the Handkerchief

"This scene, I think, will fairly illustrate itself. I hope that everyone in this audience after seeing it will know the necessity of using a handkerchief when coughing or sneezing, and be ready to inform anyone of this fact if he neglects to do so."

A group of girls is seen, all coughing and sneezing, but using handkerchiefs to cough and sneeze into.

Swatting the Fly

"Who would have thought the little fly would spread disease as it does? The tiny hairs on the fly's legs collect the germs, and then the fly shakes them off, right in the most convenient place for them to begin their work. Swat the fly! This boy shows us how to do it."

Boy with swatter is chasing flies. He shakes his head when he misses one, and nods his head with approval when he kills one.

Treatment of Slight Injuries

"Often we meet with what is apparently a slight injury, as a cut or bruise, and so pay little or no attention to it. But how often do we have to pay for this neglect? It sometimes results very seriously.

In order to avoid trouble, or be on the safe side, always give the proper care to a wound, no matter how slight it may seem. Watch closely, and see how it is done."

Mother is sitting at table, when child runs in to her with cut finger. The mother immediately washes the wound with an antiseptic, and bandages it.

Method of Resuscitation in Drowning

How many lives could be saved if we all knew how to resuscitate a person that has been rescued on the verge of drowning! If you do not know, the three boys in this scene will show you how.

One boy who is supposed to have been rescued from drowning is lying flat on the ground, and the other two are working to restore him.

The Danger of Nails

"How many accidents are due to carelessness at home! Let us all try to make our homes safe places to live in. Did you ever have the experience that this boy is having? I hope we will all pull out every nail that is not in its right place, as this boy will do, and so avoid accidents.

This picture also shows two girls walking together; one is eating an apple and offers the other a bite but she refuses.

The boy finds a block of wood with a nail sticking out of it on the ground. He finds a rock and drives the nail out.

The boy explaining says: "None of us wants to be selfish, and so, at the risk of health, do what the little girl here is doing. Fortunately her companion is wiser than she is."

Weak Stepladders

"Sometimes we realize there is danger in doing certain things, but through carelessness or thoughtlessness we pay no heed. Don't step on a ladder without giving it a thorough inspection. Falls from ladders often result in permanent injury or death. Let us remember the old saying, 'A stitch in time saves nine.' I hope that after seeing the next picture we shall all have learned that a defective stepladder is very dangerous."

Boy walks up shaky stepladder to do some repairing. Another boy calls him down from the stepladder and together they tighten the bolts, etc., and strengthen it. Then the ladder is ready for use.

Proper Way to Start a Fire in a Stove

"A frequent source of accident is the use of coal oil in making a fire. Persons may be ignorant of the danger in using oil on fire, or may think that nothing can happen to them, and do what this mother and father want to do in their hurry to build a fire. The child is there, fortunately, to correct them."

When the child sees the father and mother about to use oil to make the fire, she persuades them not to do so. She then brings them a newspaper, and shows them an article in it, which proves to them the wisdom of not using oil on fires.

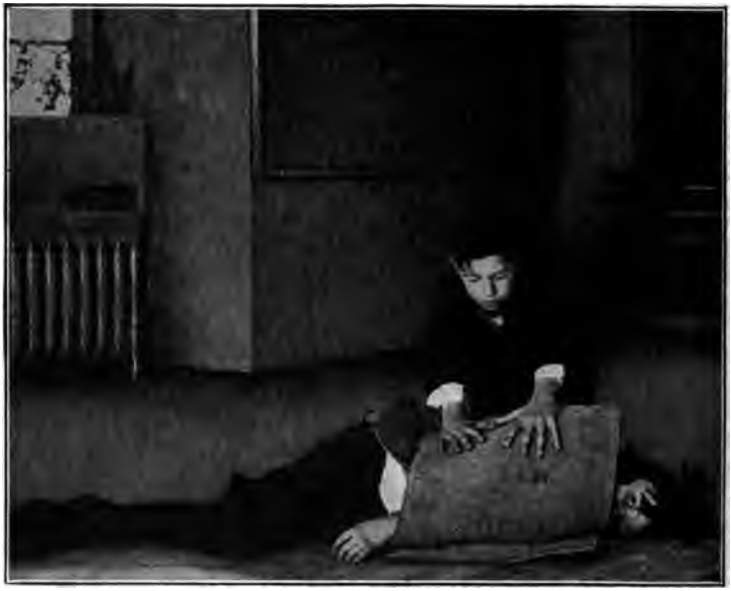
Where to Keep Matches

"Have you ever been guilty of dropping a match and not picking it up? More fires occur monthly from carelessly placed matches, than I could count on my fingers one hundred times. We should always have a place for everything and keep everything in its place. See what this sensible little housemaid does."

While dusting, the maid finds a match on the floor and places it in the match box where it belongs.

How to Put Out Fire by Rolling in Carpet

"I read in the newspaper the other day of a little boy burned to death simply because his mother, either through fright or ignorance, did not use the proper method of extinguishing the flames. Maybe if she had seen this picture, that awful accident would not have happened."



Father is reading paper when son runs in with his clothes burning. The father picks up small rug from floor and wraps boy in it and smothers the flames.

Pins in the Mouth

"Have you ever seen children putting pins in their mouths? I have, more than once; and what a dangerous practice it is. The next picture will show

you a mother at work making a dress. Instead of having a pin tray at hand, she uses her mouth for one. Her little daughter, realizing the danger, brings her a tray and so avoids trouble."

Crossing Streets

"We not only want to make our *home* a safe place, but we want to safeguard our lives while we are out on the streets. A very important rule to follow in crossing streets is, I think, 'Use your eyes, not your tongue.' One of the girls in the next picture is reminding the others what to do in crossing the street."

Several girls are seen crossing street. One girl holds them back and has them look both ways before walking across.

Banana Peel

"How many of us are guilty of having thrown a banana peel on the sidewalk or in the street! I wonder if we realized what a serious accident might have happened. This little girl is indeed fortunate to have escaped injury. See what she does with the peel."

Girl slips on peel, but fortunately does not fall. She picks up the peel, and throws it into a waste paper box, where it cannot harm anyone.

Carrying Pens Incorrectly

"This next picture, I am sure, will appeal to every boy and girl in this school. We have all learned why it is necessary to carry our pens and pencils in a closed case. See what might happen if we are thoughtless in this matter."

A boy is seen reading a book while walking along the street. He has a pen in his hand, which he is twirling with the point outward. Another boy, coming toward him, runs into the pen. While in this case the boy's thick coat saved him from injury, he might not have been so fortunate. Therefore he shows the owner of the pen the proper place for his pen, which is his pencil case.

The Umbrella

"We are all old enough to carry an umbrella, and so must know how to do so. One of the girls in the next picture evidently must be taught how."

One girl crosses the street with her umbrella down before her eyes and therefore does not see the girl who is coming toward her. This girl, however, steps out of the way, but shows the other the danger of carrying an umbrella in that way, and shows her that she should carry the umbrella over her head, and not before her face.

Conclusion

"I am sure that from this series of pantomimes you have learned some lessons which, if you apply daily at home, in school, and on the streets, will help you to make St. Louis a safe place to live in."

CHAPTER X

School Organization for Accident Prevention

The concluding chapter of this book concerns itself with the organization of the school for promoting the welfare of the school group. We have presented here, in detail, the entire organization of the school, and not merely the safety committees, in order that the reader may see that the plan of accident prevention is fundamental to successful school keeping. It is not sufficient to give children information, but it is equally important to insure the successful establishment of habits of conduct. This cannot be done by the principal and teachers directly; but by having committees on guard, the right kinds of action are kept constantly before the children, and wrong actions are corrected.

This is, moreover, no self-government plan. The principal and teachers are the only persons that are clothed with authority; but every child is made to feel a responsibility for the welfare of the whole school, and certain of the children, each quarter, are elected by the children themselves as special agents to carry out the wishes of the whole group. The children respect these leaders, because they represent the social will. Furthermore, the information gained about safety and other matters of general welfare is transformed into habits and sentiments. The best thing that can be said for this organization is that it works, and it is as effective in teaching morals, good citizenship, and health as it is in teaching accident prevention.

School Improvement Societies

To give the children opportunity for active cooperation in all matters pertaining to the welfare of the school and community, each room above the fourth grade is organized into what is known as a School Improvement Society. The room organization has a president, vice-president, secretary, assistant secretary, and as many committees as may be deemed necessary for carrying on the work of the school. The number of committees may vary somewhat in the different rooms, and in the same room at different times. As a rule, however, the following committees will be found at work in all rooms at all times:

1. Committee on the regularity and punctuality of pupils.
2. Committee on books.
3. Committee on new pupils.
4. Committee on yards and basements.
5. Committee on streets.
6. Committee on stairs and corridors.
7. Room Committee.
8. Committee on school studies.
9. Committee on safety.

It will be observed that there is a committee at work in each of the places where children are congregated during the day. It is not the function of these committees to report to the teacher or principal any infraction of the school rules, except in particular cases, but to try of their own accord to establish in the lives of all the children those habits which seem desirable for the good of the school, the community, and the children themselves. No authority is delegated to any officer or committee of the organization. The Improvement Society is a voluntary organization whose members agree to lend their assistance in improving all conditions which affect the life of the school.

A meeting of each society is held in each room once a week, the president of the room in the chair. He calls the meeting to order, entertains motions from the children on various subjects, and calls for reports from each of the committees at work in various fields. The secretary keeps a record of all meetings in a book provided for this purpose, giving particular attention to the reports having to do with suggestions relative to the improvement of conduct. The school looks to the officers of the society to see that effective work is being done by each of the committees.

The president of a room calling the meeting to order

The officers (president, vice-president, secretary, and assistant secretary) are expected to see that effective work is done by each of the committees in each of the rooms.

The committee on regularity and punctuality looks after all cases of absence and tardiness, seeking to determine the cause where possible. This committee encourages good attendance in every possible way, by reporting the average daily attendance for the week at each meeting, together with the standing of the room in relation to all other rooms in the school, and by private conference with those whose absence is the cause of a low percentage. Where pupils are

Secretary reading minutes of the last meeting

out of school for some good reason, this committee keeps the absentee informed of the work the room is undertaking, in order that he may not fall behind. Sick pupils are made happy by letters and post-cards from the room, sent under the direction of the attendance committee. The committee on books gives particular attention to the care of books and articles provided by the Board of Education. Books in each desk are inspected at regular intervals. It is the duty of this committee to see that each pupil keeps his books in a neat, tidy, and sanitary condition at all times. When a book becomes unfit for further use, or when the pupil having charge of the book fails to mend it promptly, he is courteously reminded of his duty by some member of the book committee. The welfare of all newcomers is looked after by the new pupil committee. They are introduced to their schoolmates, ushered into the games and made to feel at home on the very first day of their membership in the school. The committee on yards and basements is charged with the responsibility of looking after the condition of these parts of the school premises, seeking to break up any habits which may interfere with the neatness and sanitation of the grounds, or the physical and moral welfare of the children. It is the particular duty of this committee to see that children do not engage in dangerous forms of sport, and that the little ones are not hurt by the older boys or girls. The committee on streets exists for the purpose of seeing little ones safely across the streets and establishing the habit of crossing at the corners. Members of this committee are made to feel the importance of hearty co-operation with the policemen, in looking after the welfare of children in going to and from school. The committee on stairs and corridors take their places at each dismissal, and at such times as pupils are passing through the corridors. They are always on hand to lend their influence in establishing the ideal of good order in passing in and out of the building.

The physical appearance of the room, condition of desks, floor, window shades, wardrobe, etc., as well as the conduct of pupils in the room, are looked after in particular by the room committee. This committee is carefully instructed as to the danger arising from pupils playing in the rooms, and from an insanitary or untidy condition of room and wardrobe. The committee on school studies looks after the progress of pupils, and exists for the purpose of improving classroom work. In the modern school it is not a crime to give help; on the contrary, every incentive possible is offered to encourage co-operation. When the room is working on arithmetic, the children are grouped according to their ability in this subject. That group displaying the greatest ability to render service to their classmates in this particular subject of the curriculum constitutes the committee on arithmetic. In this manner, committees on the various school subjects, history, geography, reading, etc., etc., are chosen. The following pictures indicate a few of the activities of the various committees in their efforts to improve the school and to safeguard the lives of its members:

Committee on regularity and punctuality studying the attendance for the week and calling attention to the standing of the room.

Book committee inspecting books preparatory to making report.

Room committee discussing the case of a pupil who has gone home, leaving ruler, pen, and a book on his desk.

Committee explaining to a group of boys why they should come down the stairs one step at a time.

A committeeman on arithmetic assisting a new boy on his "tables."

It will be observed that practically each of the above mentioned committees is a committee on *safety;* but, in addition to the committees discussed in the preceding paragraph, there is a special safety committee in each room, charged with the particular responsibility of keeping before the whole room at all times the need of constant vigilance, in order to safeguard their own lives and the lives of others. The work of this committee is not limited to rooms and corridors, or yards and streets, but applies to all the activities of all the children, whether they be at work or play, in school or at home, in the building or on the street. It is the particular aim of this committee to inspire everybody in the room to make more determined efforts towards the elimination of waste and suffering sustained through carelessness. This is done in two ways. In the first place, the safety committee makes a weekly report to the room, covering the accidents of which they have read or heard, the fires of the country, with special reference to the fire loss in the home community, the health in the city, with suggestions for the prevention of any disease which may be prevalent, and the dangerous practices which they have observed among our school children. After the special committee has made its report, every pupil in the room has the opportunity of calling attention to anything on the subject that has come to his attention. For guidance in making these reports, each room is provided with the following list of common sources of accidents, with space for the addition of others:

1. A carelessly thrown match.
2. A broken window.
3. A projecting nail.
4. An unclean can or bottle.
5. Alighting from car in wrong manner.
6. Careless roller skating.
7. Reaching out of window.
8. Trying to recover objects from deep water.
9. Catching on cars and wagons.
10. Playing tag in the street.
11. Jumping on or off moving cars.
12. Throwing.
13. Sneezing without use of handkerchief.
14. Tripping or removing chair from under a person.
15. Holding umbrella over face in crossing street.
16. Skating on thin ice.
17. Neglect of a wound or scratch.
18. Handling fallen wires.
19. Sucking a dirty finger.
20. Chewing the corner of a handkerchief.
21. Holding money in the teeth.
22. Eating candy or fruit exposed in insanitary places.
23. Leaving matches where rats or mice can get them.
24. Throwing banana peel on street or sidewalk.
25. Standing on a rocking chair.
26. Sitting in a draught.
27. Sleeping without ventilation.
28. Carrying pen or pencil with point exposed.

29. Running through building.
30. Crossing street in middle of block.
31. Standing in street waiting for a car.
32. Holes in sidewalk.
33. Unsafe furnace pipes.
34. Accumulation of rubbish in basement.
35. Handling discarded cigarette stubs.

In the second place, these committees, throughout the upper rooms of the school, attempt to keep safety matters constantly before the school by a series of monthly awards. In each room there is an honor roll, including the names of those who have distinguished themselves in some way. There are seven avenues open to every pupil in the room, through which he may secure recognition in safety service, as follows:

1. By bringing to the attention of the room what is voted to be the best example of a safety rule observation.
2. By writing for adoption by all the pupils of the room the promise most needed for safety, at that particular time, e.g., "I promise not to throw in or about the school premises."
3. By making the best drawing, or displaying the best photograph, taken by himself, teaching a lesson in safety.
4. By bringing to the reading class the best clipping, for impressing the lesson on carefulness.
5. By preparing and delivering the best four-minute speech on the prevention of accidents.

6. By teaching, through pantomime, the most effective safety lesson: e.g., demonstrating methods of resuscitation in case of drowning, how to prevent infection after receiving a wound, how to board a street car, value of removing a nail from a board, danger of a defective stepladder, how to turn in a fire alarm, interesting father and mother in safety problems, how to keep matches in the home, danger of a broken wire, how to put out a fire, by rolling in a rug or coat, danger of banana peels, etc.
7. By passing the best monthly examination on some such questions, as follows: Describe the correct way to get on and off a street car. What would you do, on the discovery of a broken wire? What is the danger of spitting in public places? Name five public safety devices, with which you are acquainted, for protecting human life. What may the automobilist reasonably expect of the pedestrian? Give one important precaution regarding the handling of firearms. Tell how to call the fire department. What is the location of the box nearest your home? Nearest the school? What number do you call for the police? Name five ways by which you can distinguish a careful person.

Opportunity for getting onto the honor roll, through these various means, is afforded once a month, throughout the school year. In this manner the value of caution is kept constantly before the children.

The safety committee has a further duty. It is charged with making itself familiar with the location and use of the chemical fire extinguishers in the building and of the safety material, with method of giving the fire alarm in the school, and with the method of procedure in case of accident on the school premises. The following pictures indicate some of the special instructions given the safety committee:

How to take down the fire extinguisher

The effective use of the extinguisher being demonstrated to the children.

Familiarizing the committee with the location of the safety material.

The Safety Committees at Luncheon. They discuss the problem of accident prevention following the banquet.

At frequent intervals there are meetings of the officers of all the rooms, together with the chairmen of the various committees. The principal presides. These meetings offer opportunity for free and open discussion of all matters pertaining to the general welfare of the school. Regulations looking toward more desirable behavior on the part of the children are discussed and approved in these meetings, before being made a part of the rules of the school. In these meetings the highest honors of the school are awarded. While each room maintains an honor roll, upon which is placed the names of those who have distinguished themselves for work of one kind or another, it is left for the meeting of the representatives of all the Improvement Societies throughout the school to bestow what has come to be recognized the highest honor: namely, the awarding of a "W." This award may be earned through excellence of any form of behavior, but must be of an exceptional nature. Any pupil or teacher in the school may appear before the meeting of the society, and present evidence in favor of awarding the "W" to a particular candidate, in recognition for what is deemed exceptional conduct. This incentive is always present to spur children on to greater and greater efforts in regard to safety. This highest honor goes, not to the boy or girl who brings in the best clipping on safety, or makes the best drawing to teach a lesson in carefulness, or who passes the best theoretical examination on safety rules, but to the one who, in the eyes of his classmates and teachers, actually performs the greatest service, the one most active in safety work.

CHAPTER XI

Safety a Positive Force

By Albert W. Whitney
Chairman Committee on Education, National Safety Council

In the preceding pages there has been developed a plan, which is in successful operation, for teaching safety to children.

Underneath this there has been an implicit assumption — namely, that the ideal of safety could itself be justified. But let us before closing drag this assumption out into the light. After all, is carefulness really a virtue? Does not the safety movement in effect cut out all the adventure from life and reduce it not only to the level of material security but of spiritual insolvency? Is safety something positive? Is it not purely a matter of inhibition?

Unless some convincing reply can be made to these queries, safety cannot expect much consideration in a curriculum for red-blooded American children. The school curriculum must be a microcosm not of a washed-out, weak world, but of a world of reality.

One answer, which does not involve any appeal to reason, arises out of the vitality and enthusiasm which is found in the safety movement itself. Nothing that was merely negative could have enlisted the support that has been accorded to organized safety. The attempt to explain the strength of the hold that safety work has upon the imagination has led to the following analysis:

Safety is a double-faced idea — "Safety from" and "Safety for." The face that we most commonly see is "safety from,"— safety from being run over by automobiles, safety from typhoid fever. To bring forward the other face of safety, as President Wilson has done in his famous phrase "to make the world safe for democracy," is more unusual and yet this other side is implied in every case. In every case the idea is implicity to be completed by the addition of the thought of safety *for* a life or a condition that is better. Here for instance are some examples of the complete idea: to make the world safe *from* autocracy and *for* democracy; to make the child's life safe *from* the dangers of automobiles, and *for* the happiness and usefulness of living.

Safety is in every case a matter of substitution of something higher for something lower. Where life is not valued, where there is no higher life, there can be no safety movement. The safety movement certainly does not mean very much in India, for instance; it cannot mean much where life is so cheap.

Safety does not rob life of adventure, but only substitutes a worthy adventure for a mean adventure. Life is and will always be the great adventure. When the adventure goes out of life the flavor of life goes out too. But there are high, fine adventures and low, sordid, stupid adventures. It is not a worthy adventure to lose your arm carelessly in the gears of a lathe, or to lose your life needlessly under the wheels of a trolley car. It may be a very wonderful adventure to lose your arm or your life on a battlefield in France. It is not a worthy adventure to drown because some one rocked the boat, but it might be a very glorious adventure to drown in trying to fly across the ocean.

Surely the case is clear. Safety is not something negative after all. The teaching and practice of safety does not impoverish a child's life; it enriches it. After the convincing demonstration that Dr. Payne has made, is not safety then by all counts entitled to a place in the Public School curriculum?

APPENDIX A

A typical plan of treating statistics and problems given in this chapter will help the teacher to an effective use of the abundant material of this kind available. The plan involves the assignment, the preparation, the recitation, and the outcome or objective of the lesson. A lesson under this plan may be as follows:

1. *Assignment.* Gather data on accidents in city and make problems from these statistics.

2. *Preparation.* Put the statistics into tables and develop statements of problems, also make graphs, prepare tables, and give problem solutions. The following data of comparative accidents in the leading cities may serve to show how a class would deal with them, and would indicate the outcome of their work.

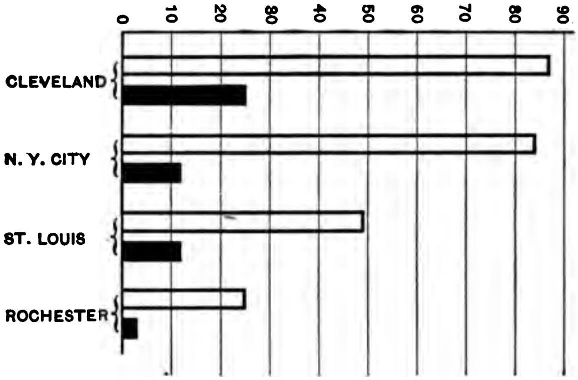
NUMBER OF FATAL ACCIDENTS IN FOUR LEADING AMERICAN CITIES, 1918

City	Estimated Population 1917	No. Deaths from Accidents	No. Deaths from Auto Accidents	No. Accidental Deaths per 100,000 population	No. Deaths from Auto Accidents per 100,000 population	Percentage of Auto Deaths of Total
Cleveland	750,000	652	189	87	25	29
New York	5,670,000	4,741	677	84	12	14
Rochester	265,000	65	9	25	3	14
St. Louis	850,000	417	100	49	12	24

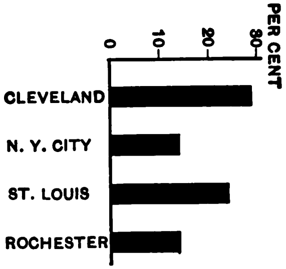
AUTO LICENSES AND FATALITIES, ST. LOUIS, 1902-1918

Year	No. Auto Licenses	No. Deaths from Auto Accidents	No. Deaths per 1000 Autos Licensed
1902	124	0	0
1903	285	0	0
1904	779	0	0
1905	1,040	0	0
1906	1,124	0	0
1907	1,529	4	2.6
1908	1,920	3	1.6
1909	2,820	6	2.1
1910	4,092	7	1.7
1911	4,771	15	3.1
1912	6,497	21	3.2
1913	8,758	45	5.1
1914	10,450	46	4.4
1915	14,246	55	3.9
1916	17,354	69	4.0
1917	24,301	79	3.3
1918	27,496	100	3.6

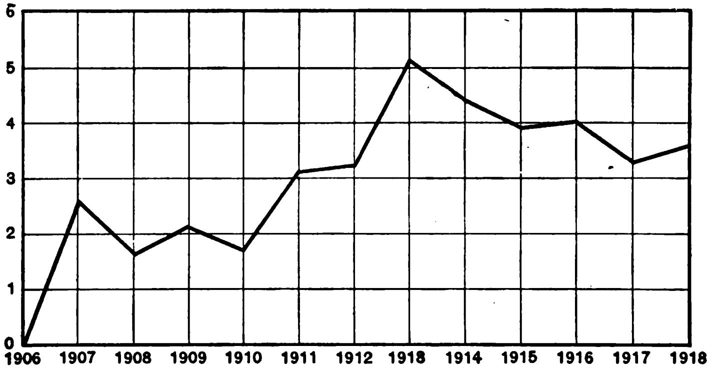
It is not necessary to include here the ordinary problem solution as that may be found in any arithmetic and both children and teacher are perfectly familiar with it. The table solution is fully explained on page 76 of this volume. Furthermore, the graph solution is the most important one in dealing with subject matter of this kind because it is the one most commonly found in scientific works and even in popular magazines dealing with the industrial and social problem. We, therefore, include several graph solutions from data included in this chapter as illustrations of what can be done in this respect.



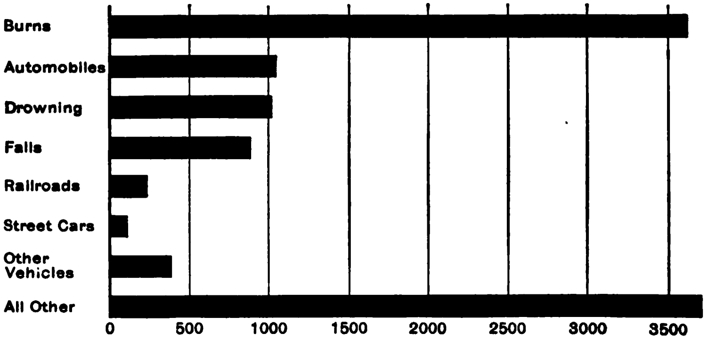
Hollow columns show total number of fatal accidents, and solid columns the number of deaths from automobiles, per 100,000 of population for the year 1918.



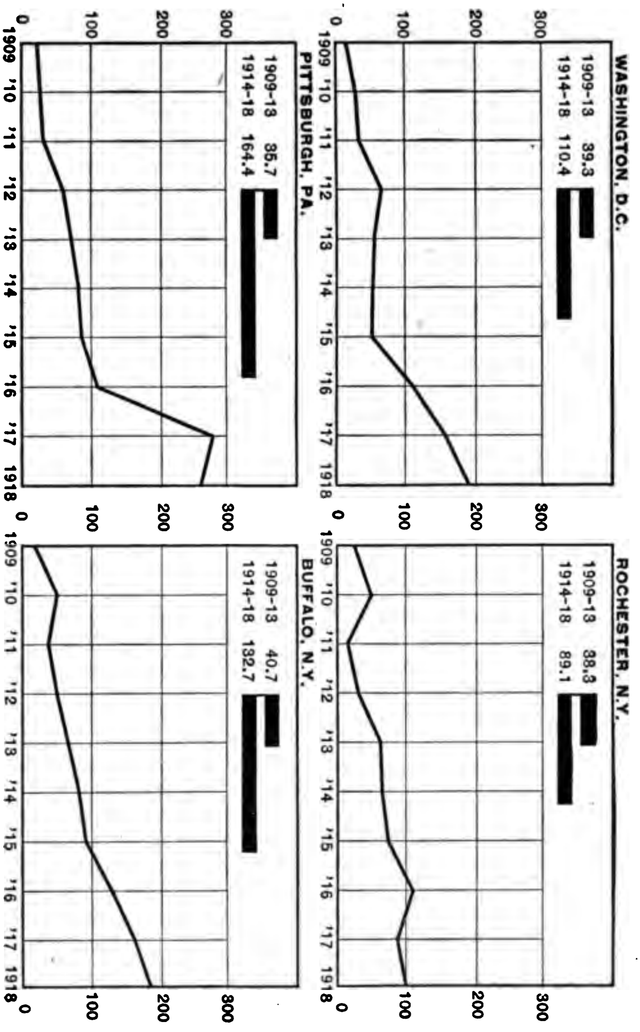
Showing percentage that auto deaths are of total number of fatal accidents in 1918.



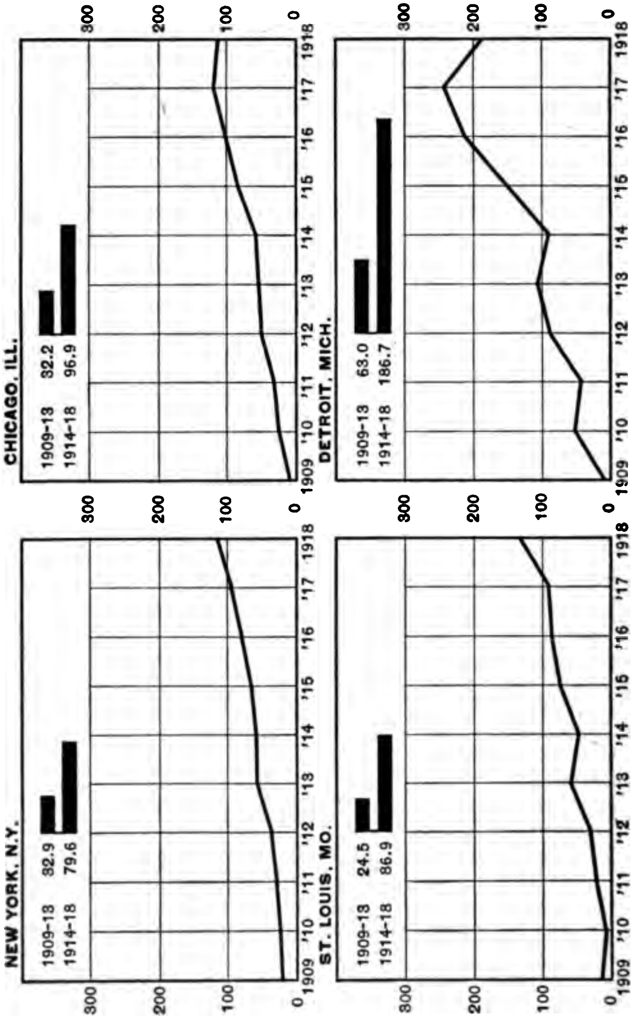
Curve showing the number of auto deaths per 1,000 of automobiles licensed in St. Louis for the years 1906-1918.



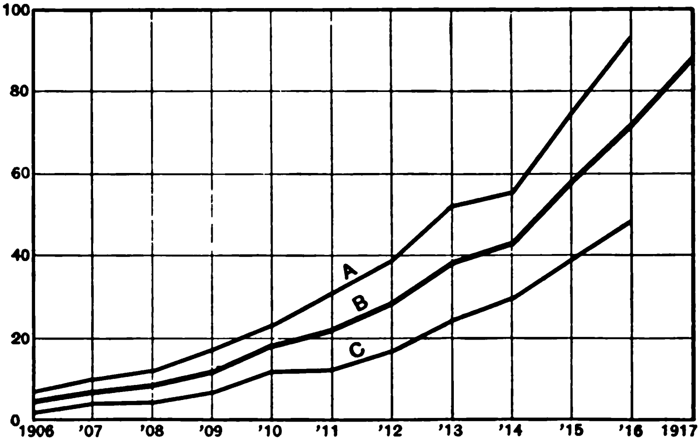
Graphs showing relative frequencies of death from various accidental causes. (For data, see page 14.)



The number of automobile fatalities per million population.

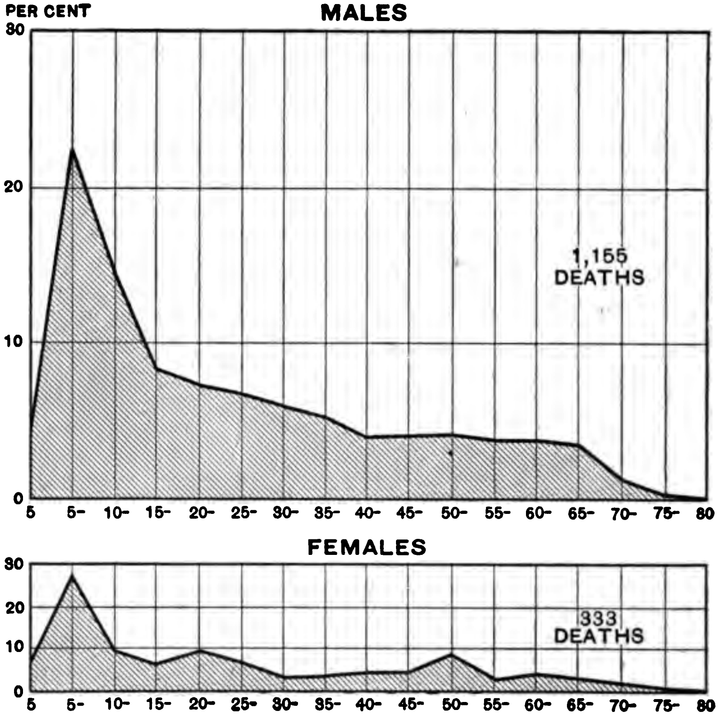


The number of automobile fatalities per million population.



Fatalities per million population from automobile accidents, 1906-1917.

A. All Registration Cities.
B. Total Registration Area.
C. Rural Registration Area.



Age distribution of deaths from automobile accidents, 1914-1916.

The children are supposed to construct graphs I-IV, while V-VIII are graphs presented for reading, interpretation, and explanation.

APPENDIX B

The picture given on page 113 represents an obsolete method of resuscitation, and the inclusion of it in the text has, therefore, been misunderstood. The statement is made on page 107 of this volume that this pantomime is wholly the work of children and is presented with the idea of showing how children work out their own problems and thus how it becomes possible for the teacher to correct errors in an effective way. This pantomime could not be children's work and at the same time be perfect. The recognized way of resuscitation from electrical shock or drowning and all cases of suspended respiration due to inhalation of gas, smoke, fumes, or other causes is by the *Prone Pressure Method*, as follows:

RESUSCITATION FROM ELECTRICAL SHOCK

Follow these instructions even if victim appears dead.

I. *Free the victim from the circuit immediately.*

Quickly *release victim* from current, being careful to *avoid* receiving a *shock*. *Use* any *dry non-conductor* (rubber gloves, clothing, rope, board) to move either the victim or the conductor. Beware of using metal or any moist material. If necessary, *shut off the current*.

II. *Instantly attend to the victim's breathing.*

1. As soon as the victim is clear of the conductor rapidly *feel* with your finger *in his mouth* and throat and remove any foreign body (tobacco, false teeth, etc.). *If* mouth is *tight shut, pay no more attention* to it until later.

Do not stop to loosen the patient's clothing, but *immediately begin actual resuscitation.* Every *moment of delay is serious.* Proceed as follows:

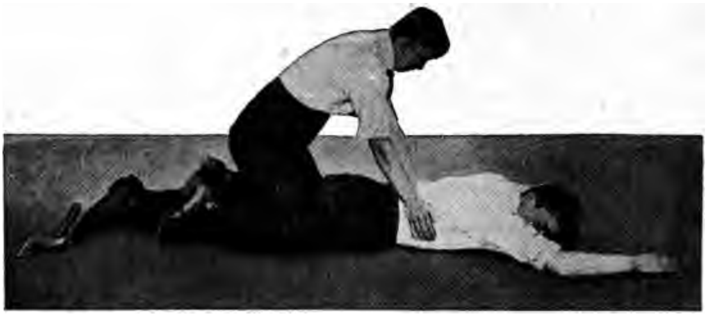


Figure 1

(*a*) Lay the *patient on his belly,* one *arm* directly *extended* overhead, the other bent at elbow, and with *face to one side,* resting on the hand or forearm, so that nose and mouth are free for breathing (see Figure 1).

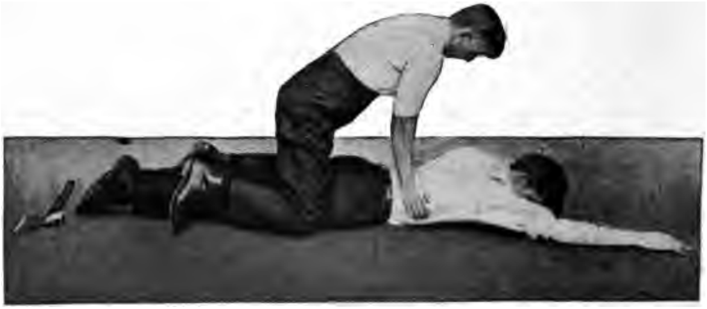


Figure 2

(*b*) *Kneel straddling the patient's hips* with knees just below the patient's hip bones or opening of pants pockets;

place the *palms* of your hands *on* the *small of the back*, with fingers spread over the lowest ribs, the *little finger* just *touching* the *lowest* rib, the thumb alongside of your fingers; tips of fingers just out of your sight, as in Figure 1.

(*c*) While counting one, two, and with *arms* held *straight*, *swing forward* slowly so that the weight of your body is gradually, but *not violently*, brought to bear upon the patient. (See Figure 2.) This act should take from two to three seconds.

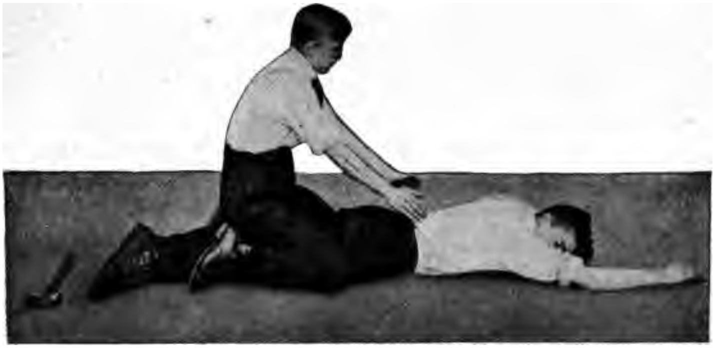


Figure 3

(*d*) While counting three, immediately *swing backward* so as to remove the pressure, thus returning to the position shown in Figure 3.

(*e*) While counting four, five—*rest*.

(*f*) *Repeat deliberately* twelve to fifteen times a minute the swinging forward and backward—a complete respiration in four or five seconds. *Time with your breathing.*

(*g*) As soon as this artificial respiration has been started, and while it is being continued, an *assistant* should *loosen* any tight clothing about the patient's neck, chest, or waist. *Keep patient warm.*

2. *Continue resuscitation* (if necessary *four hours* or longer) *without interruption,* until natural breathing is restored, or until a physician declares rigor mortis (stiffening of the body) has set in. If natural breathing stops after being restored, use resuscitation again.

3. *Do not give any liquid by mouth until patient is fully conscious.* Place ammonia near the nose, determining safe distance by first trying how near it may be held to your own. *Assistant* should *hit patient's shoe heels* about twenty (20) times with a stick or something similar and repeat this operation every five minutes until breathing commences.

4. *Give* the patient *fresh air,* but keep him warm. When patient revives, *keep him lying down* and *do not raise him.* If doctor has not arrived, give patient one teaspoonful of aromatic spirits of ammonia in a small glass of water if he can swallow.

5. Carry on *resuscitation at closest possible point to the accident. Do not move patient* until he is breathing normally without assistance. If absolutely necessary to move, he should be placed on a hard surface, such as a door or floor of conveyance. *Do not stop or interrupt resuscitation for an instant.*

III. *Send for doctor.*

If alone with victim, *do not neglect immediate and continued resuscitation* in order to call a doctor; start at once, the first few minutes are valuable. If other persons are present, send one of them for a doctor without a moment's delay.

APPENDIX C

MATERIALS FOR INSTRUCTION IN ACCIDENT PREVENTION

The value of accident instruction hinges upon the method of presentation of the subject-matter. The teacher might gather the material, construct the problems in arithmetic, prepare the language exercises in detail, arrange the stories for reading, and furnish the topics for drawing. This might also be done by textbook writers, and no doubt will be done as time goes on. But when the teacher comes to rely upon cut and dried material as a basis for her instruction in accident prevention, she will have lost her most potent force in making the instruction dynamic and in making it function in the lives of the children. The best educational value will result to the children when they draw upon their own experiences, seek out the sources of material, construct their own problems, and prepare their own stories and compositions. This procedure will allow the children to learn how to inform themselves upon vital problems, and in doing so they are attaining a double end: they are, on the one hand, acquiring information and forming habits, ideals and attitudes, and, on the other, they are acquiring skills in meeting the situations in the way that they will have to meet them in later life. The most important of the two educational outcomes is the latter.

The school principal and the teachers have therefore the problem of discovering the sources of the material that may be used and of placing it at the disposal of their pupils. This book is not supposed to provide these data, but rather to present methods, principles, and suggestions. It can further suggest the sources of the material and also indicate how this material may be brought together.

The school should make use of the public and private libraries in the community. In addition to this the school should also create a library of safety material of its own, because the community libraries cannot, however adequate they may be, provide sufficient material for school instruction. The material available may be comprised under the following heads: *first*, statistics. Two of the most valuable publications of statistics are a book entitled "Mortality Statistics of Insured Wage Earners and Their Families,"[1] and a series of graphs relating to accidents in industries.[2] This type of material may be secured at public libraries and should be gathered together in school libraries and thus be made available for the teacher in her daily instruction and for the use of the older pupils as material out of which they may construct problems and secure data for oral and written composition. There is an abundance of this kind of material for the use of schools and needs but to be brought together and made available for use. *Second*, this class of material includes the reports of state departments, the census and other reports of the United States Government, reports of the National and local safety councils, coroners' reports of the various cities, daily newspapers and magazines. From these different sources may be gathered all the data necessary for effective work in arithmetic and abundance for history and geography. *Third*, such books as "Safety First for Little Folks" and "Sure Pop" are available publications and may be used most effectively as supplementary readers.

The following references are not meant to be exhaustive, but will supply the teacher with a list that will meet all her needs for gaining an adequate notion of the safety movement and its problems and will furnish much that can be used as reference material for the children.

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